

# Titan Dicamba 700 SG (TITAN DICAMBA 700 SG HERBICIDE)

## Titan Ag

Chemwatch: 37-95893

Version No: 2.1

Safety Data Sheet according to Work Health and Safety Regulations (Hazardous Chemicals) 2023 and ADG requirements

Chemwatch Hazard Alert Code: 2

Initial Date: 29/04/2026

Revision Date: 29/04/2026

Print Date: 03/06/2026

L.GHS.AUS.EN.E

## SECTION 1 Identification of the substance / mixture and of the company / undertaking

### Product Identifier

|                               |                                                       |
|-------------------------------|-------------------------------------------------------|
| Product name                  | Titan Dicamba 700 SG (TITAN DICAMBA 700 SG HERBICIDE) |
| Chemical Name                 | Not Applicable                                        |
| Synonyms                      | Not Available                                         |
| Chemical formula              | Not Applicable                                        |
| Other means of identification | Not Available                                         |

### Relevant identified uses of the substance or mixture and uses advised against

|                          |                                                                        |
|--------------------------|------------------------------------------------------------------------|
| Relevant identified uses | Agricultural herbicide.<br>Use according to manufacturer's directions. |
|--------------------------|------------------------------------------------------------------------|

### Details of the manufacturer or importer of the safety data sheet

|                         |                                                                              |
|-------------------------|------------------------------------------------------------------------------|
| Registered company name | Titan Ag                                                                     |
| Address                 | Princes Street Marina, Suite 15/16 Princes Street Newport NSW 2106 Australia |
| Telephone               | +61 2 9999 6655                                                              |
| Fax                     | +61 2 9999 0483                                                              |
| Website                 | <a href="https://www.titanag.com.au/">https://www.titanag.com.au/</a>        |
| Email                   | titanorders@titanag.com.au                                                   |

### Emergency telephone number

|                                     |                         |
|-------------------------------------|-------------------------|
| Association / Organisation          | Titan Ag                |
| Emergency telephone number(s)       | 1800 033 111 (24 hours) |
| Other emergency telephone number(s) | Not Available           |

## SECTION 2 Hazards identification

### Classification of the substance or mixture

|                               |                                                                                                                                     |
|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Poisons Schedule              | S5                                                                                                                                  |
| Classification <sup>[1]</sup> | Acute Toxicity (Oral) Category 4, Sensitisation (Skin) Category 1, Hazardous to the Aquatic Environment Long-Term Hazard Category 3 |
| Legend:                       | 1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI |

### Label elements

|                     |                                                                                     |
|---------------------|-------------------------------------------------------------------------------------|
| Hazard pictogram(s) |  |
| Signal word         | Warning                                                                             |

### Hazard statement(s)

|      |                                                    |
|------|----------------------------------------------------|
| H302 | Harmful if swallowed.                              |
| H317 | May cause an allergic skin reaction.               |
| H412 | Harmful to aquatic life with long lasting effects. |

### Precautionary statement(s) Prevention

|      |                                                                 |
|------|-----------------------------------------------------------------|
| P280 | Wear protective gloves and protective clothing.                 |
| P261 | Avoid breathing dust/fumes.                                     |
| P264 | Wash all exposed external body areas thoroughly after handling. |

|      |                                                                        |
|------|------------------------------------------------------------------------|
| P270 | Do not eat, drink or smoke when using this product.                    |
| P273 | Avoid release to the environment.                                      |
| P272 | Contaminated work clothing should not be allowed out of the workplace. |

Precautionary statement(s) Response

|           |                                                                                     |
|-----------|-------------------------------------------------------------------------------------|
| P302+P352 | IF ON SKIN: Wash with plenty of water.                                              |
| P333+P313 | If skin irritation or rash occurs: Get medical advice/attention.                    |
| P362+P364 | Take off contaminated clothing and wash it before reuse.                            |
| P301+P312 | IF SWALLOWED: Call a POISON CENTER/doctor/physician/first aider if you feel unwell. |
| P330      | Rinse mouth.                                                                        |

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

|      |                                                                                                                                  |
|------|----------------------------------------------------------------------------------------------------------------------------------|
| P501 | Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation. |
|------|----------------------------------------------------------------------------------------------------------------------------------|

No further product hazard information.

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

| CAS No    | %[weight]                                                                                                                                                                                    | Name                 |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| 1982-69-0 | 70                                                                                                                                                                                           | dicamba, sodium salt |
| Legend:   | 1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L; * EU IOELVs available |                      |

SECTION 4 First aid measures

Description of first aid measures

|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Eye Contact  | <p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"><li>Wash out immediately with fresh running water.</li><li>Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</li><li>Seek medical attention without delay; if pain persists or recurs seek medical attention.</li><li>Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Skin Contact | <p>If skin contact occurs:</p> <ul style="list-style-type: none"><li>Immediately remove all contaminated clothing, including footwear.</li><li>Flush skin and hair with running water (and soap if available).</li><li>Seek medical attention in event of irritation.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Inhalation   | <ul style="list-style-type: none"><li>If dust is inhaled, remove from contaminated area.</li><li>Encourage patient to blow nose to ensure clear passage of breathing.</li><li>If irritation or discomfort persists seek medical attention.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Ingestion    | <ul style="list-style-type: none"><li><b>IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.</b></li><li>For advice, contact a Poisons Information Centre or a doctor.</li><li>Urgent hospital treatment is likely to be needed.</li><li>In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition.</li><li>If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the SDS should be provided. Further action will be the responsibility of the medical specialist.</li><li>If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the SDS.</li></ul> <p><b>Where medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:</b></p> <ul style="list-style-type: none"><li><b>INDUCE</b> vomiting with fingers down the back of the throat, <b>ONLY IF CONSCIOUS</b>. Lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li></ul> <p><b>NOTE:</b> Wear a protective glove when inducing vomiting by mechanical means.</p> |

Indication of any immediate medical attention and special treatment needed

As in all cases of suspected poisoning, follow the ABCDEs of emergency medicine (airway, breathing, circulation, disability, exposure), then the ABCDEs of toxicology (antidotes, basics, change absorption, change distribution, change elimination).  
For poisons (where specific treatment regime is absent):

BASIC TREATMENT

- Establish a patent airway with suction where necessary.
- Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- Administer oxygen by non-rebreather mask at 10 to 15 L/min.
- Monitor and treat, where necessary, for pulmonary oedema.
- Monitor and treat, where necessary, for shock.
- Anticipate seizures.
- DO NOT** use emetics. Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.

ADVANCED TREATMENT

- ▶ Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- ▶ Positive-pressure ventilation using a bag-valve mask might be of use.
- ▶ Monitor and treat, where necessary, for arrhythmias.
- ▶ Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.
- ▶ Drug therapy should be considered for pulmonary oedema.
- ▶ Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications.
- ▶ Treat seizures with diazepam.
- ▶ Proparacaine hydrochloride should be used to assist eye irrigation.

BRONSTEIN, A.C. and CURRANCE, P.L.  
EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994  
Treat symptomatically.  
Dicamba is rapidly eliminated in animals, mainly as the glucuronide.

SECTION 5 Firefighting measures

Extinguishing media

- ▶ There is no restriction on the type of extinguisher which may be used.
- ▶ Use extinguishing media suitable for surrounding area.

Special hazards arising from the substrate or mixture

|                      |                                                                                                                                          |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Fire Incompatibility | ▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------|

Advice for firefighters

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fire Fighting         | <ul style="list-style-type: none"><li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li><li>▶ Wear breathing apparatus plus protective gloves in the event of a fire.</li><li>▶ Prevent, by any means available, spillage from entering drains or water courses.</li><li>▶ Use fire fighting procedures suitable for surrounding area.</li><li>▶ <b>DO NOT</b> approach containers suspected to be hot.</li><li>▶ Cool fire exposed containers with water spray from a protected location.</li><li>▶ If safe to do so, remove containers from path of fire.</li><li>▶ Equipment should be thoroughly decontaminated after use.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Fire/Explosion Hazard | <ul style="list-style-type: none"><li>▶ Combustible solid which burns but propagates flame with difficulty; it is estimated that most organic dusts are combustible (circa 70%) - according to the circumstances under which the combustion process occurs, such materials may cause fires and / or dust explosions.</li><li>▶ Organic powders when finely divided over a range of concentrations regardless of particulate size or shape and suspended in air or some other oxidizing medium may form explosive dust-air mixtures and result in a fire or dust explosion (including secondary explosions).</li><li>▶ Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust (420 micron or less) may burn rapidly and fiercely if ignited - particles exceeding this limit will generally not form flammable dust clouds; once initiated, however, larger particles up to 1400 microns diameter will contribute to the propagation of an explosion.</li><li>▶ In the same way as gases and vapours, dusts in the form of a cloud are only ignitable over a range of concentrations; in principle, the concepts of lower explosive limit (LEL) and upper explosive limit (UEL) are applicable to dust clouds but only the LEL is of practical use; - this is because of the inherent difficulty of achieving homogeneous dust clouds at high temperatures (for dusts the LEL is often called the "Minimum Explosible Concentration", MEC).</li><li>▶ When processed with flammable liquids/vapors/mists,ignitable (hybrid) mixtures may be formed with combustible dusts. Ignitable mixtures will increase the rate of explosion pressure rise and the Minimum Ignition Energy (the minimum amount of energy required to ignite dust clouds - MIE) will be lower than the pure dust in air mixture. The Lower Explosive Limit (LEL) of the vapour/dust mixture will be lower than the individual LELs for the vapors/mists or dusts.</li><li>▶ A dust explosion may release of large quantities of gaseous products; this in turn creates a subsequent pressure rise of explosive force capable of damaging plant and buildings and injuring people.</li><li>▶ Usually the initial or primary explosion takes place in a confined space such as plant or machinery, and can be of sufficient force to damage or rupture the plant. If the shock wave from the primary explosion enters the surrounding area, it will disturb any settled dust layers, forming a second dust cloud, and often initiate a much larger secondary explosion. All large scale explosions have resulted from chain reactions of this type.</li><li>▶ Dry dust can be charged electrostatically by turbulence, pneumatic transport, pouring, in exhaust ducts and during transport.</li><li>▶ Build-up of electrostatic charge may be prevented by bonding and grounding.</li><li>▶ Powder handling equipment such as dust collectors, dryers and mills may require additional protection measures such as explosion venting.</li><li>▶ All movable parts coming in contact with this material should have a speed of less than 1-meter/sec.</li><li>▶ A sudden release of statically charged materials from storage or process equipment, particularly at elevated temperatures and/ or pressure, may result in ignition especially in the absence of an apparent ignition source.</li><li>▶ One important effect of the particulate nature of powders is that the surface area and surface structure (and often moisture content) can vary widely from sample to sample, depending of how the powder was manufactured and handled; this means that it is virtually impossible to use flammability data published in the literature for dusts (in contrast to that published for gases and vapours).</li><li>▶ Autoignition temperatures are often quoted for dust clouds (minimum ignition temperature (MIT)) and dust layers (layer ignition temperature (LIT)); LIT generally falls as the thickness of the layer increases.</li></ul> <p>Combustion products include:</p> <ul style="list-style-type: none"><li>▶ carbon monoxide (CO)</li><li>▶ carbon dioxide (CO2)</li><li>hydrogen chloride</li><li>phosgene</li><li>nitrogen oxides (NOx)</li><li>metal oxides</li><li>▶ other pyrolysis products typical of burning organic material.</li></ul> <p>May emit poisonous fumes.<br/>May emit corrosive fumes.</p> |
| HAZCHEM               | Not Applicable                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Minor Spills | <ul style="list-style-type: none"><li>Remove all ignition sources.</li><li>Clean up all spills immediately.</li><li>Avoid contact with skin and eyes.</li><li>Control personal contact with the substance, by using protective equipment.</li><li>Use dry clean up procedures and avoid generating dust.</li><li>Place in a suitable, labelled container for waste disposal.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Major Spills | <p>Moderate hazard.</p> <ul style="list-style-type: none"><li><b>CAUTION:</b> Advise personnel in area.</li><li>Alert Emergency Services and tell them location and nature of hazard.</li><li>Control personal contact by wearing protective clothing.</li><li>Prevent, by any means available, spillage from entering drains or water courses.</li><li>Recover product wherever possible.</li><li><b>IF DRY:</b> Use dry clean up procedures and avoid generating dust. Collect residues and place in sealed plastic bags or other containers for disposal. <b>IF WET:</b> Vacuum/shovel up and place in labelled containers for disposal.</li><li><b>ALWAYS:</b> Wash area down with large amounts of water and prevent runoff into drains.</li><li>If contamination of drains or waterways occurs, advise Emergency Services.</li></ul> |

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 Handling and storage

Precautions for safe handling

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Safe handling     | <ul style="list-style-type: none"><li>Avoid skin contact, including inhalation.</li><li>Wear protective clothing when risk of exposure occurs.</li><li>Use in a well-ventilated area.</li><li>Prevent concentration in hollows and sumps.</li><li><b>DO NOT enter confined spaces until atmosphere has been checked.</b></li><li><b>DO NOT</b> allow material to come in direct contact with human skin or eyes.</li><li><b>DO NOT</b> allow material to come in contact with exposed food or food contact surfaces.</li><li>Suitable PPE must be worn at all times.</li><li>Avoid contact with incompatible materials.</li><li><b>When handling, DO NOT eat, drink or smoke.</b></li><li>Keep containers securely sealed when not in use.</li><li>Avoid physical damage to containers.</li><li>Always wash hands with soap and water after handling.</li><li>Work clothes should be laundered separately. Launder contaminated clothing before re-use.</li><li>Use good occupational work practice.</li><li>Observe manufacturer's storage and handling recommendations contained within this SDS.</li><li>Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.</li><li>Organic powders when finely divided over a range of concentrations regardless of particulate size or shape and suspended in air or some other oxidizing medium may form explosive dust-air mixtures and result in a fire or dust explosion (including secondary explosions)</li><li>Minimise airborne dust and eliminate all ignition sources. Keep away from heat, hot surfaces, sparks, and flame.</li><li>Establish good housekeeping practices.</li><li>Remove dust accumulations on a regular basis by vacuuming or gentle sweeping to avoid creating dust clouds.</li><li>Use continuous suction at points of dust generation to capture and minimise the accumulation of dusts. Particular attention should be given to overhead and hidden horizontal surfaces to minimise the probability of a "secondary" explosion. According to NFPA Standard 654, dust layers 1/32 in.(0.8 mm) thick can be sufficient to warrant immediate cleaning of the area.</li><li>Do not use air hoses for cleaning.</li><li>Minimise dry sweeping to avoid generation of dust clouds. Vacuum dust-accumulating surfaces and remove to a chemical disposal area. Vacuums with explosion-proof motors should be used.</li><li>Control sources of static electricity. Dusts or their packages may accumulate static charges, and static discharge can be a source of ignition.</li><li>Solids handling systems must be designed in accordance with applicable standards (e.g. NFPA including 654 and 77) and other national guidance.</li><li>Do not empty directly into flammable solvents or in the presence of flammable vapors.</li><li>The operator, the packaging container and all equipment must be grounded with electrical bonding and grounding systems. Plastic bags and plastics cannot be grounded, and antistatic bags do not completely protect against development of static charges.</li></ul> <p>Empty containers may contain residual dust which has the potential to accumulate following settling. Such dusts may explode in the presence of an appropriate ignition source.</p> <ul style="list-style-type: none"><li><b>Do NOT cut, drill, grind or weld such containers.</b></li><li>In addition ensure such activity is not performed near full, partially empty or empty containers without appropriate workplace safety authorisation or permit.</li></ul> |
| Other information | <ul style="list-style-type: none"><li>Store in original containers.</li><li>Keep containers securely sealed.</li><li>Store in a cool, dry area protected from environmental extremes.</li><li>Store away from incompatible materials and foodstuff containers.</li><li>Protect containers against physical damage and check regularly for leaks.</li><li>Observe manufacturer's storage and handling recommendations contained within this SDS.</li></ul> <p>For major quantities:</p> <ul style="list-style-type: none"><li>Consider storage in banded areas - ensure storage areas are isolated from sources of community water (including stormwater, ground water, lakes and streams).</li><li>Ensure that accidental discharge to air or water is the subject of a contingency disaster management plan; this may require consultation with local authorities.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

Conditions for safe storage, including any incompatibilities

|                         |                                                                                                                                                                 |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suitable container      | <ul style="list-style-type: none"><li>Polyethylene or polypropylene container.</li><li>Check all containers are clearly labelled and free from leaks.</li></ul> |
| Storage incompatibility | <ul style="list-style-type: none"><li>Avoid reaction with oxidising agents</li></ul>                                                                            |

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

Continued...

## Titan Dicamba 700 SG (TITAN DICAMBA 700 SG HERBICIDE)

## INGREDIENT DATA

Not Available

## MATERIAL DATA

It is the goal of the ACGIH (and other Agencies) to recommend TLVs (or their equivalent) for all substances for which there is evidence of health effects at airborne concentrations encountered in the workplace.

At this time no TLV has been established, even though this material may produce adverse health effects (as evidenced in animal experiments or clinical experience). Airborne concentrations must be maintained as low as is practically possible and occupational exposure must be kept to a minimum.

**NOTE:** The ACGIH occupational exposure standard for Particles Not Otherwise Specified (P.N.O.S) does NOT apply.

## Exposure controls

| Appropriate engineering controls                                                                                                                               | <p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.</p> <p>Employers may need to use multiple types of controls to prevent employee overexposure.</p> <ul style="list-style-type: none"> <li>Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction.</li> <li>If in spite of local exhaust an adverse concentration of the substance in air could occur, respiratory protection should be considered.</li> </ul> <p>Such protection might consist of:</p> <p>(a): particle dust respirators, if necessary, combined with an absorption cartridge;</p> <p>(b): filter respirators with absorption cartridge or canister of the right type;</p> <p>(c): fresh-air hoods or masks.</p> <p>Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.</p> <table border="1"> <thead> <tr> <th>Type of Contaminant:</th><th>Air Speed:</th></tr> </thead> <tbody> <tr> <td>direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)</td><td>1-2.5 m/s (200-500 f/min.)</td></tr> <tr> <td>grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).</td><td>2.5-10 m/s (500-2000 f/min.)</td></tr> </tbody> </table> <p>Within each range the appropriate value depends on:</p> <table border="1"> <thead> <tr> <th>Lower end of the range</th><th>Upper end of the range</th></tr> </thead> <tbody> <tr> <td>1: Room air currents minimal or favourable to capture</td><td>1: Disturbing room air currents</td></tr> <tr> <td>2: Contaminants of low toxicity or of nuisance value only.</td><td>2: Contaminants of high toxicity</td></tr> <tr> <td>3: Intermittent, low production.</td><td>3: High production, heavy use</td></tr> <tr> <td>4: Large hood or large air mass in motion</td><td>4: Small hood-local control only</td></tr> </tbody> </table> <p>Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 4-10 m/s (800-2000 f/min) for extraction of crusher dusts generated 2 metres distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.</p> | Type of Contaminant: | Air Speed: | direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion) | 1-2.5 m/s (200-500 f/min.) | grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion). | 2.5-10 m/s (500-2000 f/min.) | Lower end of the range | Upper end of the range | 1: Room air currents minimal or favourable to capture | 1: Disturbing room air currents | 2: Contaminants of low toxicity or of nuisance value only. | 2: Contaminants of high toxicity | 3: Intermittent, low production. | 3: High production, heavy use | 4: Large hood or large air mass in motion | 4: Small hood-local control only |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|------------------------|------------------------|-------------------------------------------------------|---------------------------------|------------------------------------------------------------|----------------------------------|----------------------------------|-------------------------------|-------------------------------------------|----------------------------------|
| Type of Contaminant:                                                                                                                                           | Air Speed:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      |            |                                                                                                                                                                |                            |                                                                                                                                                      |                              |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |                                  |
| direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion) | 1-2.5 m/s (200-500 f/min.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                      |            |                                                                                                                                                                |                            |                                                                                                                                                      |                              |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |                                  |
| grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).           | 2.5-10 m/s (500-2000 f/min.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                      |            |                                                                                                                                                                |                            |                                                                                                                                                      |                              |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |                                  |
| Lower end of the range                                                                                                                                         | Upper end of the range                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                      |            |                                                                                                                                                                |                            |                                                                                                                                                      |                              |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |                                  |
| 1: Room air currents minimal or favourable to capture                                                                                                          | 1: Disturbing room air currents                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                      |            |                                                                                                                                                                |                            |                                                                                                                                                      |                              |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |                                  |
| 2: Contaminants of low toxicity or of nuisance value only.                                                                                                     | 2: Contaminants of high toxicity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                      |            |                                                                                                                                                                |                            |                                                                                                                                                      |                              |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |                                  |
| 3: Intermittent, low production.                                                                                                                               | 3: High production, heavy use                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                      |            |                                                                                                                                                                |                            |                                                                                                                                                      |                              |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |                                  |
| 4: Large hood or large air mass in motion                                                                                                                      | 4: Small hood-local control only                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                      |            |                                                                                                                                                                |                            |                                                                                                                                                      |                              |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |                                  |
| Individual protection measures, such as personal protective equipment                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                      |            |                                                                                                                                                                |                            |                                                                                                                                                      |                              |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |                                  |
| Eye and face protection                                                                                                                                        | <ul style="list-style-type: none"> <li>Safety glasses with side shields.</li> <li>Chemical goggles.[AS/NZS 1337.1, EN166 or national equivalent]</li> <li>Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                      |            |                                                                                                                                                                |                            |                                                                                                                                                      |                              |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |                                  |
| Skin protection                                                                                                                                                | See Hand protection below                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                      |            |                                                                                                                                                                |                            |                                                                                                                                                      |                              |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |                                  |
| Hands/feet protection                                                                                                                                          | <p><b>NOTE:</b></p> <ul style="list-style-type: none"> <li>The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.</li> <li>Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.</li> </ul> <p>The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.</p> <p>The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.</p> <p>Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.</p> <p>Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:</p> <ul style="list-style-type: none"> <li>frequency and duration of contact,</li> <li>chemical resistance of glove material,</li> <li>glove thickness and</li> <li>dexterity</li> </ul> <p>Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).</p> <ul style="list-style-type: none"> <li>When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.</li> <li>When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.</li> <li>Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                      |            |                                                                                                                                                                |                            |                                                                                                                                                      |                              |                        |                        |                                                       |                                 |                                                            |                                  |                                  |                               |                                           |                                  |

Continued...

## Titan Dicamba 700 SG (TITAN DICAMBA 700 SG HERBICIDE)

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                         | <ul style="list-style-type: none"> <li>Contaminated gloves should be replaced.</li> </ul> <p>As defined in ASTM F-739-96 in any application, gloves are rated as:</p> <ul style="list-style-type: none"> <li>Excellent when breakthrough time &gt; 480 min</li> <li>Good when breakthrough time &gt; 20 min</li> <li>Fair when breakthrough time &lt; 20 min</li> <li>Poor when glove material degrades</li> </ul> <p>For general applications, gloves with a thickness typically greater than 0.35 mm, are recommended.</p> <p>It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.</p> <p>Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers technical data should always be taken into account to ensure selection of the most appropriate glove for the task.</p> <p>Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:</p> <ul style="list-style-type: none"> <li>Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.</li> <li>Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential</li> </ul> <p>Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.</p> <p>Experience indicates that the following polymers are suitable as glove materials for protection against undissolved, dry solids, where abrasive particles are not present.</p> <ul style="list-style-type: none"> <li>polychloroprene.</li> <li>nitrile rubber.</li> <li>butyl rubber.</li> <li>fluorocautchouc.</li> <li>polyvinyl chloride.</li> </ul> <p>Gloves should be examined for wear and/ or degradation constantly.</p> |
| <b>Body protection</b>  | See Other protection below                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Other protection</b> | <ul style="list-style-type: none"> <li>Overalls.</li> <li>P.V.C apron.</li> <li>Barrier cream.</li> <li>Skin cleansing cream.</li> <li>Eye wash unit.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

## Respiratory protection

Type -P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator |
|------------------------------------|----------------------|----------------------|------------------------|
| up to 10 x ES                      | P1<br>Air-line*      | -                    | PAPR-P1                |
| up to 50 x ES                      | Air-line**           | P2                   | PAPR-P2                |
| up to 100 x ES                     | -                    | P3                   | -                      |
|                                    |                      | Air-line*            | -                      |
| 100+ x ES                          | -                    | Air-line**           | PAPR-P3                |

\* - Negative pressure demand \*\* - Continuous flow

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO<sub>2</sub>), G = Agricultural chemicals, K = Ammonia(NH<sub>3</sub>), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

- Respirators may be necessary when engineering and administrative controls do not adequately prevent exposures.
  - The decision to use respiratory protection should be based on professional judgment that takes into account toxicity information, exposure measurement data, and frequency and likelihood of the worker's exposure - ensure users are not subject to high thermal loads which may result in heat stress or distress due to personal protective equipment (powered, positive flow, full face apparatus may be an option).
  - Published occupational exposure limits, where they exist, will assist in determining the adequacy of the selected respiratory protection. These may be government mandated or vendor recommended.
  - Certified respirators will be useful for protecting workers from inhalation of particulates when properly selected and fit tested as part of a complete respiratory protection program.
  - Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU)
  - Use approved positive flow mask if significant quantities of dust becomes airborne.
  - Try to avoid creating dust conditions.
- Class P2 particulate filters are used for protection against mechanically and thermally generated particulates or both.
- P2 is a respiratory filter rating under various international standards, Filters at least 94% of airborne particles
- Suitable for:
- Relatively small particles generated by mechanical processes eg. grinding, cutting, sanding, drilling, sawing.
  - Sub-micron thermally generated particles e.g. welding fumes, fertilizer and bushfire smoke.
  - Biologically active airborne particles under specified infection control applications e.g. viruses, bacteria, COVID-19, SARS

## SECTION 9 Physical and chemical properties

## Information on basic physical and chemical properties

|                                                     |                         |                                                |                |
|-----------------------------------------------------|-------------------------|------------------------------------------------|----------------|
| <b>Appearance</b>                                   | Grey to brown granules. |                                                |                |
| <b>Physical state</b>                               | Divided Solid           | <b>Relative density (Water = 1)</b>            | 0.6            |
| <b>Odour</b>                                        | Slight                  | <b>Partition coefficient n-octanol / water</b> | Not Available  |
| <b>Odour threshold</b>                              | Not Available           | <b>Auto-ignition temperature (°C)</b>          | 232            |
| <b>pH (as supplied)</b>                             | Not Available           | <b>Decomposition temperature (°C)</b>          | Not Available  |
| <b>Melting point / freezing point (°C)</b>          | ~-7                     | <b>Viscosity (cSt)</b>                         | Not Available  |
| <b>Initial boiling point and boiling range (°C)</b> | Not Available           | <b>Molecular weight (g/mol)</b>                | Not Applicable |

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## Titan Dicamba 700 SG (TITAN DICAMBA 700 SG HERBICIDE)

|                                                       |                 |                                                            |                |
|-------------------------------------------------------|-----------------|------------------------------------------------------------|----------------|
| <b>Flash point (°C)</b>                               | Not Applicable  | <b>Taste</b>                                               | Not Available  |
| <b>Evaporation rate</b>                               | Not Available   | <b>Explosive properties</b>                                | Not Available  |
| <b>Flammability</b>                                   | Not Applicable  | <b>Oxidising properties</b>                                | Not Available  |
| <b>Upper Explosive Limit (%)</b>                      | Not Applicable  | <b>Surface Tension (dyn/cm or mN/m)</b>                    | Not Applicable |
| <b>Lower Explosive Limit (%)</b>                      | Not Applicable  | <b>Volatile Component (%vol)</b>                           | Not Available  |
| <b>Vapour pressure (kPa)</b>                          | Not Available   | <b>Gas group</b>                                           | Not Available  |
| <b>Solubility in water</b>                            | Partly miscible | <b>pH as a solution (1%)</b>                               | Not Available  |
| <b>Vapour density (Air = 1)</b>                       | Not Available   | <b>VOC g/L</b>                                             | Not Available  |
| <b>Heat of Combustion (kJ/g)</b>                      | Not Available   | <b>Ignition Distance (cm)</b>                              | Not Available  |
| <b>Flame Height (cm)</b>                              | Not Available   | <b>Flame Duration (s)</b>                                  | Not Available  |
| <b>Enclosed Space Ignition Time Equivalent (s/m3)</b> | Not Available   | <b>Enclosed Space Ignition Deflagration Density (g/m3)</b> | Not Available  |

## SECTION 10 Stability and reactivity

|                                           |                                                                                                                                                                                                      |
|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Reactivity</b>                         | See section 7                                                                                                                                                                                        |
| <b>Chemical stability</b>                 | <ul style="list-style-type: none"> <li>▶ Unstable in the presence of incompatible materials.</li> <li>▶ Product is considered stable.</li> <li>▶ Hazardous polymerisation will not occur.</li> </ul> |
| <b>Possibility of hazardous reactions</b> | See section 7                                                                                                                                                                                        |
| <b>Conditions to avoid</b>                | See section 7                                                                                                                                                                                        |
| <b>Incompatible materials</b>             | See section 7                                                                                                                                                                                        |
| <b>Hazardous decomposition products</b>   | See section 5                                                                                                                                                                                        |

## SECTION 11 Toxicological information

## Information on toxicological effects

|                                             |                                                                                                         |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------|
| <b>a) Acute Toxicity</b>                    | There is sufficient evidence to classify this material as acutely toxic.                                |
| <b>b) Skin Irritation/Corrosion</b>         | Based on available data, the classification criteria are not met.                                       |
| <b>c) Serious Eye Damage/Irritation</b>     | Based on available data, the classification criteria are not met.                                       |
| <b>d) Respiratory or Skin sensitisation</b> | There is sufficient evidence to classify this material as sensitising to skin or the respiratory system |
| <b>e) Mutagenicity</b>                      | Based on available data, the classification criteria are not met.                                       |
| <b>f) Carcinogenicity</b>                   | Based on available data, the classification criteria are not met.                                       |
| <b>g) Reproductivity</b>                    | Based on available data, the classification criteria are not met.                                       |
| <b>h) STOT - Single Exposure</b>            | Based on available data, the classification criteria are not met.                                       |
| <b>i) STOT - Repeated Exposure</b>          | Based on available data, the classification criteria are not met.                                       |
| <b>j) Aspiration Hazard</b>                 | Based on available data, the classification criteria are not met.                                       |

|                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhaled</b>      | <p>The material is not thought to produce either adverse health effects or irritation of the respiratory tract following inhalation (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.</p> <p>Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.</p> <p>If prior damage to the circulatory or nervous systems has occurred or if kidney damage has been sustained, proper screenings should be conducted on individuals who may be exposed to further risk if handling and use of the material result in excessive exposures.</p>                                               |
| <b>Ingestion</b>    | <p>Accidental ingestion of the material may be harmful; animal experiments indicate that ingestion of less than 150 gram may be fatal or may produce serious damage to the health of the individual.</p> <p>Acutely toxic doses of dicamba in animals produce myotonic muscular spasms, exhaustion, urinary incontinence, dyspnea, cyanosis and, occasionally, death. Some animals exhibited minor lung haemorrhage. Recovery occurred in 2-3 days without apparent microscopic pathology.</p> <p>Rats fed 500 mg/kg/day for 90 days showed slightly decreased body weight gain and food consumption and evidence of reduced glycogen storage.</p>                                                                                                                                                                                                                                                                                                                                                        |
| <b>Skin Contact</b> | <p>Skin contact is not thought to produce harmful health effects (as classified under EC Directives using animal models). Systemic harm, however, has been identified following exposure of animals by at least one other route and the material may still produce health damage following entry through wounds, lesions or abrasions. Good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>Application of 500 mg/kg/day dicamba to rabbit skin for 3 weeks produced moderate irritation.</p> <p>Dicamba has produced moderate sensitisation in guinea pigs.</p> <p>Entry into the blood-stream through, for example, cuts, abrasions, puncture wounds or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.</p> |
| <b>Eye</b>          | <p>Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may cause transient discomfort characterised by tearing or conjunctival redness (as with windburn). Slight abrasive damage may also result. The material may produce foreign body irritation in certain individuals.</p> <p>Dicamba was extremely irritating and produced irreversible corrosive damage in rabbit eyes.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Chronic</b>      | <p>Practical experience shows that skin contact with the material is capable either of inducing a sensitisation reaction in a substantial number of individuals, and/or of producing a positive response in experimental animals.</p> <p>Substances that can cause occupational asthma (also known as asthmagens and respiratory sensitisers) can induce a state of specific airway hyper-responsiveness via an immunological, irritant or other mechanism. Once the airways have become hyper-responsive, further</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

Titan Dicamba 700 SG (TITAN DICAMBA 700 SG HERBICIDE)

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>exposure to the substance, sometimes even to tiny quantities, may cause respiratory symptoms. These symptoms can range in severity from a runny nose to asthma. Not all workers who are exposed to a sensitiser will become hyper-responsive and it is impossible to identify in advance who are likely to become hyper-responsive.</p> <p>Substances that can cause occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in people with pre-existing air-way hyper-responsiveness. The latter substances are not classified as asthmagens or respiratory sensitisers. Wherever it is reasonably practicable, exposure to substances that can cause occupational asthma should be prevented. Where this is not possible the primary aim is to apply adequate standards of control to prevent workers from becoming hyper-responsive.</p> <p>Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance.</p> <p>Dicamba exposed workers exhibit muscle cramps, dyspnea, nausea, vomiting, skin rashes, loss of voice or swelling of the cervical glands. In a study with pregnant rabbits, dicamba produced maternal toxicity and slightly reduced foetal body weights and increased post-implantation loss.</p> <p>Long term exposure to high dust concentrations may cause changes in lung function (i.e. pneumoconiosis) caused by particles less than 0.5 micron penetrating and remaining in the lung. A prime symptom is breathlessness. Lung shadows show on X-ray.</p> |
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|                                                       |                                                   |               |
|-------------------------------------------------------|---------------------------------------------------|---------------|
| Titan Dicamba 700 SG (TITAN DICAMBA 700 SG HERBICIDE) | TOXICITY                                          | IRRITATION    |
|                                                       | Not Available                                     | Not Available |
| dicamba, sodium salt                                  | TOXICITY                                          | IRRITATION    |
|                                                       | Dermal (rabbit) LD50: >20000 mg/kg <sup>[2]</sup> | Not Available |
|                                                       | Oral (Rat) LD50: 6764 mg/kg <sup>[2]</sup>        |               |

Legend: 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

|                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Titan Dicamba 700 SG (TITAN DICAMBA 700 SG HERBICIDE) & DICAMBA, SODIUM SALT | <p>The following information refers to contact allergens as a group and may not be specific to this product.</p> <p>Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested.</p> <p>for dicamba:</p> <p>Dicamba is moderately toxic by ingestion and slightly toxic by inhalation or dermal exposure. Symptoms of poisoning with dicamba include loss of appetite (anorexia), vomiting, muscle weakness, slowed heart rate, shortness of breath, central nervous system effects (victim may become excited or depressed), benzoic acid in the urine, incontinence, cyanosis (bluing of the skin and gums), and exhaustion following repeated muscle spasms. In addition to these symptoms, inhalation can cause irritation of the linings of the nasal passages and the lungs, and loss of voice. Most individuals who have survived severe poisoning from dicamba have recovered within 2 to 3 days with no permanent effects.</p> <p>Dicamba is very irritating and corrosive and can cause severe and permanent damage to the eyes. In some individuals, dicamba is a skin sensitiser. It may cause skin burns. There is no evidence that dicamba is absorbed into the body through the skin.</p> <p><b>Reproductive Effects:</b> In a 3-generation study, dicamba did not affect the reproductive capacity of rats. When rabbits were given doses of 0, 0.5, 1, 3, 10 or 20 mg/kg/day of technical dicamba from days 6 through 18 of pregnancy, toxic effects on the mothers, slightly reduced fetal body weights, and increased loss of fetuses occurred at the 10 mg/kg dose. EPA has set the NOAEL for this study at 3 mg/kg/day.</p> <p><b>Teratogenic Effects:</b> Dicamba is suspected of being a human teratogen. No teratogenic effects have been shown in lab animals such as rabbits and rats.</p> <p><b>Mutagenic Effects:</b> Dicamba has not been shown to be a mutagen.</p> <p><b>Carcinogenic Effects:</b> Data from laboratory studies are inadequate for EPA to determine if dicamba can increase the risk of cancer in humans. Rats fed up to 25 mg dicamba/kg/day for 2 years showed no increased incidence of tumors.</p> <p><b>Organ Toxicity:</b> In mice, some enlargement of liver cells has occurred. A similar effect has not been shown in man.</p> <p><b>Fate in Humans and Animals:</b> Dicamba was excreted rapidly by rats, mainly in the urine, when administered orally or subcutaneously. One to 4% was excreted in the faeces. Mice, rats, rabbits and dogs excreted 85% of an oral dose as unmetabolised dicamba in the urine within 48 hours of dosing. Eventually, between 90 and 99% of the dose was excreted unmetabolised in the urine. This indicates that dicamba is rapidly absorbed into the bloodstream from the gastrointestinal tract. Like most organic acids, dicamba is joined to glycine, or glucuronic acid in the liver. When dicamba was ingested daily in the feed, the concentrations in different organs reached a steady state within 2 weeks. When daily intake stopped, storage in the organs declined rapidly. It is therefore concluded that dicamba does not bioaccumulate in mammalian tissues.</p> <p>Following an attempted suicide with a mixture of dicamba and 2,4-D, dicamba levels in the blood serum and urine of the victim became undetectable within 2 weeks</p> |
|------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                   |   |                          |   |
|-----------------------------------|---|--------------------------|---|
| Acute Toxicity                    | ✓ | Carcinogenicity          | ✗ |
| Skin Irritation/Corrosion         | ✗ | Reproductivity           | ✗ |
| Serious Eye Damage/Irritation     | ✗ | STOT - Single Exposure   | ✗ |
| Respiratory or Skin sensitisation | ✓ | STOT - Repeated Exposure | ✗ |
| Mutagenicity                      | ✗ | Aspiration Hazard        | ✗ |

Legend: ✗ – Data either not available or does not fill the criteria for classification  
✓ – Data available to make classification

SECTION 12 Ecological information

|                                                       |               |                    |               |               |               |
|-------------------------------------------------------|---------------|--------------------|---------------|---------------|---------------|
| Toxicity                                              |               |                    |               |               |               |
| Titan Dicamba 700 SG (TITAN DICAMBA 700 SG HERBICIDE) | Endpoint      | Test Duration (hr) | Species       | Value         | Source        |
|                                                       | Not Available | Not Available      | Not Available | Not Available | Not Available |

Titan Dicamba 700 SG (TITAN DICAMBA 700 SG HERBICIDE)

| dicamba, sodium salt                                                                                                                                                                                                                                                                                                                           | Endpoint  | Test Duration (hr) | Species                       | Value            | Source |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--------------------|-------------------------------|------------------|--------|
|                                                                                                                                                                                                                                                                                                                                                | EC50      | 48h                | Crustacea                     | 32.7-44.3mg/L    | 4      |
|                                                                                                                                                                                                                                                                                                                                                | EC50      | 96h                | Algae or other aquatic plants | 31.309-41.44mg/L | 4      |
|                                                                                                                                                                                                                                                                                                                                                | NOEC(ECx) | 24h                | Algae or other aquatic plants | 12.5mg/L         | 4      |
|                                                                                                                                                                                                                                                                                                                                                | LC50      | 96h                | Fish                          | 480-649mg/L      | 4      |
| <b>Legend:</b> <i>Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. US EPA, Ecotox database - Aquatic Toxicity Data 4. ECETOC Aquatic Hazard Assessment Data 5. NITE (Japan) - Bioconcentration Data 6. METI (Japan) - Bioconcentration Data 7. Vendor Data</i> |           |                    |                               |                  |        |

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.  
Wastes resulting from use of the product must be disposed of on site or at approved waste sites.  
for dicamba:  
Kow 3.98 (pH 5), 0.16 (pH 7), 0.58 (pH 9)  
**Ecotoxicology:**  
Dicamba is of low toxicity to aquatic organisms  
Birds Acute oral LD50 for mallard ducks 2000 mg/kg  
Eight day dietary LC50 for mallard ducks and bobwhite quail >10000 mg/kg diet  
Fish LC50 (96 h): for rainbow trout and bluegill sunfish 135 mg/l  
Bees Non-toxic.  
Daphnia EC50 (48 h): 110 mg/l  
**Environmental fate:**  
**Breakdown of Chemical in Soil and Groundwater:** Dicamba does not bind to soil particles (Koc = 2 g/ml) and is highly soluble in water. It is therefore highly mobile in the soil and may contaminate groundwater. Its leaching potential increases with precipitation and the volume applied.  
Metabolism by soil microorganisms is the major pathway of loss under most soil conditions ; the principal metabolite is 3,6-dichlorosalicylic acid.  
Under conditions amenable to rapid metabolism DT50 <14 d, Koc = 2.  
The rate of biodegradation increases with temperature and increasing soil moisture, and tends to be faster when soil is slightly acidic. When soil moisture increases above 50%, the rate of biodegradation declines.  
Dicamba slowly breaks down in sunlight. Volatilisation from soil surfaces is probably not significant, but some volatilization may occur from plant surfaces. It is stable to water and other chemicals in the soil. In humid areas, dicamba will be leached from the soil in 3-12 weeks. The half-life if dicamba in soil has varied from 4 to 555 days with the typical half-life being 1 to 4 weeks. Under conditions suitable to rapid metabolism, the half-life is less than 2 weeks. At an application rate of 6.7 kg/HA, no dicamba remained in the soil after one year.  
**Breakdown of Chemical in Water:** In water, microbial degradation is the main route of dicamba disappearance. Photolysis may also occur. Aquatic hydrolysis, volatilisation, adsorption to sediments, and bioconcentration are not expected to be significant.  
**Breakdown of Chemical in Vegetation:** Dicamba is rapidly taken up by the leaves and roots of plants and it is readily translocated to other plant parts. In some plant species, dicamba accumulates in the tips of mature leaves. Desirable broadleaf plants (such as fruit trees, tomatoes, etc.) may be harmed during their growth and development stages. In wheat the major metabolite is 5-hydroxy-2-methoxy-3,6-dichlorobenzoic acid; 3,6-dichlorosalicylic acid is also a metabolite.  
Residues of dicamba on treated plants can disappear through exudation from the roots into the surrounding soil, metabolism within the plant, or by loss from leaf surfaces

DO NOT discharge into sewer or waterways.

Persistence and degradability

| Ingredient | Persistence: Water/Soil               | Persistence: Air                      |
|------------|---------------------------------------|---------------------------------------|
|            | No Data available for all ingredients | No Data available for all ingredients |

Bioaccumulative potential

| Ingredient           | Bioaccumulation     |
|----------------------|---------------------|
| dicamba, sodium salt | LOW (LogKOW = -0.9) |

Mobility in soil

| Ingredient | Mobility                              |
|------------|---------------------------------------|
|            | No Data available for all ingredients |

SECTION 13 Disposal considerations

Waste treatment methods

|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product / Packaging disposal | <ul style="list-style-type: none"><li>Containers may still present a chemical hazard/ danger when empty.</li><li>Return to supplier for reuse/ recycling if possible.</li></ul> Otherwise: <ul style="list-style-type: none"><li>If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.</li><li>Where possible retain label warnings and SDS and observe all notices pertaining to the product.</li></ul> Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.<br>A Hierarchy of Controls seems to be common - the user should investigate: <ul style="list-style-type: none"><li>Reduction</li><li>Reuse</li><li>Recycling</li><li>Disposal (if all else fails)</li></ul> This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate. In most instances the supplier of the material should be consulted. <ul style="list-style-type: none"><li>DO NOT allow wash water from cleaning or process equipment to enter drains.</li><li>It may be necessary to collect all wash water for treatment before disposal.</li><li>In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.</li><li>Where in doubt contact the responsible authority.</li></ul> |
|                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

SECTION 14 Transport information

Labels Required

|                  |                |
|------------------|----------------|
| Marine Pollutant | NO             |
| HAZCHEM          | Not Applicable |

Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

14.7. Maritime transport in bulk according to IMO instruments

14.7.1. Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

| Product name         | Group          |
|----------------------|----------------|
| dicamba, sodium salt | Not Applicable |

14.7.3. Transport in bulk in accordance with the IGC Code

| Product name         | Ship Type      |
|----------------------|----------------|
| dicamba, sodium salt | Not Applicable |

SECTION 15 Regulatory information

Safety, health and environmental regulations / legislation specific for the substance or mixture

dicamba, sodium salt is found on the following regulatory lists

- Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
- Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5
- Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6

Additional Regulatory Information

Not Applicable

National Inventory Status

| National Inventory                                | Status                                                                                                                                                                                            |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Australia - AIC / Australia Non-Industrial Use    | No (dicamba, sodium salt)                                                                                                                                                                         |
| Canada - DSL                                      | No (dicamba, sodium salt)                                                                                                                                                                         |
| Canada - NDSL                                     | Yes                                                                                                                                                                                               |
| China - IECSC                                     | No (dicamba, sodium salt)                                                                                                                                                                         |
| Europe - EINEC / ELINCS / NLP                     | Yes                                                                                                                                                                                               |
| Japan - ENCS                                      | No (dicamba, sodium salt)                                                                                                                                                                         |
| Korea - KECI                                      | No (dicamba, sodium salt)                                                                                                                                                                         |
| New Zealand - NZIoC                               | No (dicamba, sodium salt)                                                                                                                                                                         |
| Philippines - PICCS                               | No (dicamba, sodium salt)                                                                                                                                                                         |
| USA - TSCA                                        | All chemical substances in this product have been designated as TSCA Inventory 'Active'                                                                                                           |
| Taiwan - TCSI                                     | No (dicamba, sodium salt)                                                                                                                                                                         |
| Mexico - INSQ                                     | No (dicamba, sodium salt)                                                                                                                                                                         |
| Vietnam - NCI                                     | Yes                                                                                                                                                                                               |
| Russia - FBEPH                                    | Yes                                                                                                                                                                                               |
| UAE - Control List (Banned/Restricted Substances) | No (dicamba, sodium salt)                                                                                                                                                                         |
| Legend:                                           | Yes = All CAS declared ingredients are on the inventory<br>No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration. |

SECTION 16 Other information

|               |            |
|---------------|------------|
| Revision Date | 29/04/2026 |
| Initial Date  | 29/04/2026 |

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be

Continued...

**Titan Dicamba 700 SG (TITAN DICAMBA 700 SG HERBICIDE)**

considered.

**Definitions and abbreviations**

- PC - TWA: Permissible Concentration-Time Weighted Average
- PC - STEL: Permissible Concentration-Short Term Exposure Limit
- IARC: International Agency for Research on Cancer
- ACGIH: American Conference of Governmental Industrial Hygienists
- STEL: Short Term Exposure Limit
- TEEL: Temporary Emergency Exposure Limit,
- IDLH: Immediately Dangerous to Life or Health Concentrations
- ES: Exposure Standard
- OSF: Odour Safety Factor
- NOAEL: No Observed Adverse Effect Level
- LOAEL: Lowest Observed Adverse Effect Level
- TLV: Threshold Limit Value
- LOD: Limit Of Detection
- OTV: Odour Threshold Value
- BCF: BioConcentration Factors
- BEI: Biological Exposure Index
- DNEL: Derived No-Effect Level
- PNEC: Predicted no-effect concentration
- MARPOL: International Convention for the Prevention of Pollution from Ships
- IMSBC: International Maritime Solid Bulk Cargoes Code
- IGC: International Gas Carrier Code
- IBC: International Bulk Chemical Code
  
- AIIC: Australian Inventory of Industrial Chemicals
- DSL: Domestic Substances List
- NDSL: Non-Domestic Substances List
- IECSC: Inventory of Existing Chemical Substance in China
- EINECS: European INventory of Existing Commercial chemical Substances
- ELINCS: European List of Notified Chemical Substances
- NLP: No-Longer Polymers
- ENCS: Existing and New Chemical Substances Inventory
- KECI: Korea Existing Chemicals Inventory
- NZIoC: New Zealand Inventory of Chemicals
- PICCS: Philippine Inventory of Chemicals and Chemical Substances
- TSCA: Toxic Substances Control Act
- TCSI: Taiwan Chemical Substance Inventory
- INSQ: Inventario Nacional de Sustancias Químicas
- NCI: National Chemical Inventory
- FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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