Safety Data Sheet
according to WHS Regulations

Printing date 08.08.2019 Revision: 08.08.2019

1 Identification

Product Name: TITAN TREFLAN HERBICIDE

Other Means of Identification: Mixture

Recommended Use of the Chemical and Restriction on Use: Agricultural herbicide

Details of Manufacturer or Importer:
Titan Ag Pty Ltd
15/16 Princess Street
Newport NSW 2106

Phone Number: 02 9999 6655

Emergency telephone number: 02 9999 6655

2 Hazard(s) Identification

Hazardous Nature:
Classified as Hazardous according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia criteria.
Not classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7th edition)


health hazard

Carcinogenicity 2	H351	Suspected of causing cancer.
Aspiration Hazard 1	H304	May be fatal if swallowed and enters airways.


environment

Aquatic Acute 1	H400	Very toxic to aquatic life.
Aquatic Chronic 1	H410	Very toxic to aquatic life with long lasting effects.

Skin Sensitisation 1	H317	May cause an allergic skin reaction.

Signal Word Danger

Hazard Statements
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H304 May be fatal if swallowed and enters airways.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P321	Specific treatment (see on this label).
P331	Do NOT induce vomiting.

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P302+P352 IF ON SKIN: Wash with plenty of water.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P391 Collect spillage.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national regulations.

3 Composition and Information on Ingredients

Chemical Characterization: Mixtures
Description: Mixture of substances listed below with nonhazardous additions.

Hazardous Components:		
CAS: 64742-95-6	Solvent naphtha (petroleum), light arom. Aspiration Hazard 1, H304; Flammable Liquids 4, H227	48%
CAS: 1582-09-8	Trifluralin Carcinogenicity 2, H351; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Sensitisation 1, H317	52%

4 First Aid Measures

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. Seek medical attention if breathing problems develop.

Skin Contact:
In case of skin contact, immediately remove contaminated clothing and wash affected areas with water and soap. Seek medical attention if symptoms occur.

Eye Contact:
In case of eye contact, hold eyelids open and rinse with water for at least 15 minutes. Seek medical attention if symptoms occur.

Ingestion:
If swallowed, do not induce vomiting. Immediately rinse mouth with water. Give a glass of water. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

Symptoms Caused by Exposure:
Inhalation: May cause respiratory irritation.
Skin Contact: May cause an allergic skin reaction.
Eye Contact: May cause eye irritation, redness and watering.
Ingestion: May cause nausea and gastrointestinal irritation. May be fatal if swallowed and enters airways.

5 Fire Fighting Measures

Suitable Extinguishing Media: Water fog, foam, dry chemical or carbon dioxide.

Specific Hazards Arising from the Chemical:
Hazardous combustion products include oxides of carbon and nitrogen, hydrogen cyanide, other nitrogen compounds, hydrogen fluoride, other fluorine compounds, water and smoke.
Combustible liquid.
Containers close to fire should be removed if safe to do so. Use water spray to cool fire exposed containers.

Special Protective Equipment and Precautions for Fire Fighters:
When fighting a major fire wear self-contained breathing apparatus and protective equipment.

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6 Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures:
Wear approved respiratory protection, chemical resistant gloves, protective clothing and safety boots. Evacuate all non-essential personnel from affected area. Do not breathe vapours. Ensure adequate ventilation. Extinguish all sources of ignition. Avoid sparks and open flames. No smoking.

Environmental Precautions:
In the event of a major spill, prevent spillage from entering drains or water courses.

Methods and Materials for Containment and Cleaning Up:
Stop leak if safe to do so and absorb spill with sand, earth, vermiculite or some other absorbent material. Collect the spilled material and place into a suitable container for disposal.

7 Handling and Storage

Precautions for Safe Handling:
Use of safe work practices are recommended to avoid eye or skin contact and inhalation of vapours. Use only outdoors or in a well-ventilated area.
Take precautionary measures against static discharge. Food, beverages and tobacco products should not be stored or consumed where this material is in use. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. Contaminated work clothing must not be allowed out of the workplace. Provide eyewash fountains and safety showers in close proximity to points of potential exposure.

Conditions for Safe Storage:
Store in a cool, dry and well ventilated area. Keep container tightly closed when not in use. Protect from heat, sparks, open flames and other sources of ignition. Keep away from strong oxidising agents, strong acids and strong bases.

8 Exposure Controls and Personal Protection

Exposure Standards:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

Engineering Controls: Natural ventilation should be adequate under normal use conditions.

Respiratory Protection:
Respiratory protection is not required under normal use conditions.
Use an approved vapour respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapour, inadequate ventilation, development of respiratory tract irritation) and engineering controls are not feasible. See Australian Standards AS/NZS 1715 and 1716 for more information.

Skin Protection:
PVC or rubber gloves. See Australian/New Zealand Standard AS/NZS 2161 for more information. When selecting gloves for use against certain chemicals, the degradation resistance, permeation rate and permeation breakthrough time should be considered.
Occupational protective clothing (depending on conditions in which it has to be used, in particular as regards the period for which it is worn, which shall be determined on the basis of the seriousness of the risk, the frequency of exposure to the risk, the characteristics of the workstation of each worker and the performance of the protective clothing). See Australian/New Zealand Standard AS/NZS 4501 for more information.

Eye and Face Protection:
Eye and face protectors for protection against splashing materials or liquids. See Australian/New Zealand Standard AS/NZS 1337 for more information.

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9 Physical and Chemical Properties

Appearance:	
Form:	Liquid
Colour:	Transparent, bright orange
Odour:	Characteristic hydrocarbon odour
Odour Threshold:	No information available
pH-Value:	4 - 6
Melting point/freezing point:	No information available
Initial Boiling Point/Boiling Range:	139 - 140 °C
Flash Point:	>62 °C
Flammability:	Combustible
Auto-ignition Temperature:	No information available
Decomposition Temperature:	No information available
Explosion Limits:	
Lower:	No information available
Upper:	No information available
Vapour Pressure:	No information available
Relative Density at 20 °C:	1.06
Vapour Density:	No information available
Evaporation Rate:	No information available
Solubility in Water:	Emulsifiable
Partition Coefficient (n-octanol/water):	No information available

10 Stability and Reactivity

Possibility of Hazardous Reactions: Hazardous polymerisation will not occur.

Chemical Stability: Stable at ambient temperature and under normal conditions of use.

Conditions to Avoid: Heat, sparks, open flames and other sources of ignition.

Incompatible Materials: Strong oxidising agents, strong acids and strong bases.

Hazardous Decomposition Products:
Oxides of carbon and nitrogen, hydrogen cyanide, other nitrogen compounds, hydrogen fluoride, other fluorine compounds, water and smoke.

11 Toxicological Information

Toxicity:

LD_{50}/LC_{50} Values Relevant for Classification:		
CAS: 64742-95-6 Solvent naphtha (petroleum), light arom.		
Oral	LD_{50}	>6,800 mg/kg (rat)
Dermal	LD_{50}	>3,400 mg/kg (rabbit)
Inhalation	LC_{50}/4 h	>10.2 mg/l (rat)
CAS: 1582-09-8 Trifluralin		
Oral	LD_{50}	>2,000 mg/kg (dog)
		>5,000 mg/kg (mouse)
		>10,000 mg/kg (rat)
		>2,000 mg/kg (rabbit)
Dermal	LD_{50}	>2,000 mg/kg (rabbit)

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Inhalation	LC_{50}/4 h	>2.8 mg/l (rat)

Acute Health Effects
Inhalation: May cause respiratory irritation.
Skin: May cause an allergic skin reaction.
Eye: May cause eye irritation, redness and watering.
Ingestion: May cause nausea and gastrointestinal irritation. May be fatal if swallowed and enters airways.

Skin Corrosion / Irritation: Based on classification principles, the classification criteria are not met.

Serious Eye Damage / Irritation: Based on classification principles, the classification criteria are not met.

Respiratory or Skin Sensitisation: May cause an allergic skin reaction.

Germ Cell Mutagenicity: Based on classification principles, the classification criteria are not met.

Carcinogenicity:
Suspected of causing cancer.
Trifluralin is classified by IARC as Group 3 - Not classifiable as to its carcinogenicity to humans.

Reproductive Toxicity: Based on classification principles, the classification criteria are not met.

Specific Target Organ Toxicity (STOT) - Single Exposure:
Based on classification principles, the classification criteria are not met.

Specific Target Organ Toxicity (STOT) - Repeated Exposure:
Based on classification principles, the classification criteria are not met.

Aspiration Hazard: May be fatal if swallowed and enters airways.

Chronic Health Effects: May cause damage to the liver, kidneys and thyroid.

Existing Conditions Aggravated by Exposure: No information available

Additional toxicological information:
The Australian Acceptable Daily Intake (ADI) for trifluralin for a human is 0.02 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOAEL of 2.5 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species.
(Ref: Australian Pesticides and Veterinary Medicines Authority, 'Acceptable Daily Intakes for Agricultural and Veterinary Chemicals', 2019).

12 Ecological Information

Ecotoxicity:
Trifulralin is practically nontoxic to birds and bees.
LD50 >2000 mg/kg (bobwhite quail)
Trifluralin is toxic to earthworms at exposure levels above permitted application rates.

Aquatic toxicity:
Very Toxic to aquatic life with long lasting effects.

CAS: 1582-09-8 Trifluralin	
LC_{50}/96 h	0.05-0.07 mg/l (bluegill)
	0.02-0.06 mg/l (rainbow trout)
LC_{50}/48 h	0.5-0.6 mg/l (daphnia)

Persistence and Degradability: No further relevant information available.

Bioaccumulative Potential: No further relevant information available.

Mobility in Soil: No further relevant information available.

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Other adverse effects: No further relevant information available.

13 Disposal Considerations

Disposal Methods and Containers: Dispose according to applicable local and state government regulations.

Special Precautions for Landfill or Incineration:
Please consult your state Land Waste Management Authority for more information.

14 Transport Information

UN Number	Not regulated
Proper Shipping Name	Not regulated
Dangerous Goods Class	Not regulated
Packing Group:	Not regulated

15 Regulatory Information

Australian Inventory of Chemical Substances:	
CAS: 64742-95-6	Solvent naphtha (petroleum), light arom.
CAS: 1582-09-8	Trifluralin

Standard for the Uniform Scheduling of Drugs and Poisons (SUSMP) - Poison Schedule:
Poisons Schedule: 5

16 Other Information

Date of Preparation or Last Revision: 08.08.2019

Prepared by: MSDS.COM.AU Pty Ltd www.msds.com.au

Abbreviations and acronyms:
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC_{50}: Lethal concentration, 50 percent
LD_{50}: Lethal dose, 50 percent
IARC: International Agency for Research on Cancer
STEL: Short Term Exposure Limit
TWA: Time Weighted Average
NES: National Exposure Standard (Safe Work Australia - Workplace Exposure Standards For Airborne Contaminants)
Flammable Liquids 4: Flammable liquids – Category 4
Skin Sensitisation 1: Skin sensitisation, Hazard Category 1
Carcinogenicity 2: Carcinogenicity – Category 2
Aspiration Hazard 1: Aspiration hazard – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment, short-term (Acute). Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment, long-term (Chronic). Category 1

Disclaimer
This SDS is prepared in accord with the Safe Work Australia document “Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals - February 2016”
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