SAFETY DATA SHEET

According to Safe Work Australia

Printing date 24.11.2015 Revision: 24.11.2015

1 . IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

Product Name: GENFARM THIRAM 600 FUNGICIDE

Other Means of Identification: Mixture

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

Details of Manufacturer or Importer:
Landmark Operations Limited
Suite 3, Level 1, Building B
11 Talavera Road
Macquarie Park NSW 2113

Phone Number: 02 9889 5400

Emergency telephone number: National Poison Information Centre: 13 11 26

2 . HAZARDS 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

STOT RE 2	H373	May cause damage to organs through prolonged or repeated exposure.

environment

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

Acute Tox. (Oral) 4	H302	Harmful if swallowed.
Acute Tox. (Inhalation) 4	H332	Harmful if inhaled.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2A	H319	Causes serious eye irritation.
Skin Sens. 1	H317	May cause an allergic skin reaction.

Flam. Liq. 4	H227	Combustible liquid.

Signal Word Warning

Hazard Statements

H227	Combustible liquid.
H302+H332	Harmful if swallowed or if inhaled.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H373	May cause damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.

(Contd. on page 2)

SAFETY DATA SHEET

According to Safe Work Australia

Printing date 24.11.2015 Revision: 24.11.2015

Product Name: GENFARM THIRAM 600 FUNGICIDE

(Contd. of page 1)

Precautionary Statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P273	Avoid release to the environment.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321	Specific treatment (see on this label).
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P314	Get medical advice/attention if you feel unwell.
P330	Rinse mouth.
P370+P378	In case of fire: Use for extinction: CO2, powder or water spray.
P302+P352	IF ON SKIN: Wash with plenty of water.
P391	Collect spillage.
P362+P364	Take off contaminated clothing and wash it before reuse.
P403+P235	Store in a well-ventilated place. Keep cool.
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:		
137-26-8	thiram STOT RE 2, H373; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. (Oral) 4, H302; Acute Tox. (Inhalation) 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317	60%

4 . FIRST AID MEASURES

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. 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 persist.

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

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.

(Contd. on page 3)

SAFETY DATA SHEET

According to Safe Work Australia

Printing date 24.11.2015 Revision: 24.11.2015

Product Name: GENFARM THIRAM 600 FUNGICIDE

(Contd. of page 2)

Symptoms Caused by Exposure:
Inhalation: Harmful if inhaled. May cause mild respiratory irritation.
Skin Contact: May be harmful in contact with skin. Causes skin irritation, itchiness and redness. May cause an allergic skin reaction, rash or inflammation.
Eye Contact: Causes serious eye irritation, reddening and watering.
Ingestion: Harmful if swallowed. May cause gastrointestinal irritation, causing reddening and a burning sensation to the mouth and throat. Symptoms of exposure include hoarseness, sneezing, coughing, bronchitis, inflammation of nose or throat, dizziness, fatigue, headache, nausea, diarrhoea and other gastrointestinal problems.

5 . FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Use fire extinguishing methods suitable to surrounding conditions.

Specific Hazards Arising from the Chemical:
Hazardous combustion products include oxides of carbon, nitrogen and sulphur, other nitrogen compounds, other sulphur compounds, hydrogen cyanide and smoke.
Combustible Liquid Class 1
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.

6 . ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:
Wear appropriate respiratory protection and protective clothing. Evacuate all non-essential personnel from affected area. Do not breathe vapours. Ensure adequate ventilation.

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.
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. 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 in original container tightly closed when not in use. Protect from direct sunlight, heat, sparks, open flames and other sources of ignition. Keep away from strong oxidising agents.

8 . EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Standards:	
137-26-8 thiram	
NES	TWA: 1 mg/m³ Sen

(Contd. on page 4)

SAFETY DATA SHEET

According to Safe Work Australia

Printing date 24.11.2015 Revision: 24.11.2015

Product Name: GENFARM THIRAM 600 FUNGICIDE

(Contd. of page 3)

Engineering Controls: Ensure adequate ventilation of the working area.

Respiratory Protection:
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.

9 . PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	
Form:	Liquid
Colour:	Light green, thick
Odour:	No information available
Odour Threshold:	No information available
pH-Value:	No information available
Melting point/Melting range:	No information available
Initial Boiling Point/Boiling Range:	No information available
Flash Point:	>61 °C
	Not applicable
Flammability:	Combustible Liquid Class 1
Auto-ignition Temperature:	No information available
Decomposition Temperature:	No information available
Explosion Limits:	
Lower:	No information available
Upper:	No information available
Vapour Pressure:	Negligible at normal ambient temperatures.
Relative Density:	~1.133
Vapour Density:	No information available
Evaporation Rate:	No information available
Solubility in Water at 20 °C:	0.03 g/L

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, hot surfaces and direct sunlight.

Incompatible Materials: Strong oxidising agents, acids and bases.

(Contd. on page 5)

SAFETY DATA SHEET

According to Safe Work Australia

Printing date 24.11.2015 Revision: 24.11.2015

Product Name: GENFARM THIRAM 600 FUNGICIDE

(Contd. of page 4)

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

11 . TOXICOLOGICAL INFORMATION

Toxicity:

LD_{50}/LC_{50} Values Relevant for Classification:		
137-26-8 thiram		
Oral	LD_{50}	1500 - 2000 mg/kg (mice)
		210 mg/kg (rabbit)
		620 - >1900 mg/kg (rat)
Dermal	LD_{50}	>1000 mg/kg (rat)
		>1000 mg/kg (rabbit)
Inhalation	LC_{50}/4 h	>500 mg/L (rat)

Acute Health Effects
Inhalation: Harmful if inhaled. May cause mild respiratory irritation.
Skin:
May be harmful in contact with skin. Causes skin irritation, itchiness and redness. May cause an allergic skin reaction, rash or inflammation.
Eye: Causes serious eye irritation, reddening and watering.
Ingestion:
Harmful if swallowed. May cause gastrointestinal irritation, causing reddening and a burning sensation to the mouth and throat. Symptoms of exposure include hoarseness, sneezing, coughing, bronchitis, inflammation of nose or throat, dizziness, fatigue, headache, nausea, diarrhoea and other gastro intestinal problems.

Skin Corrosion / Irritation: Causes skin irritation.

Serious Eye Damage / Irritation: Causes serious eye irritation.

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

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

Carcinogenicity: This product does NOT contain any IARC listed chemicals.

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:
May cause damage to organs through prolonged or repeated exposure.

Aspiration Hazard: Based on classification principles, the classification criteria are not met.

Chronic Health Effects:
Prolonged or repeated exposure may cause drowsiness, confusion, loss of sex drive, incoordination, slurred speech, paralysis, loss of muscle tone and hair loss.
Repeated exposure may also cause allergic reactions including dermatitis, watery eyes and sensitivity to light.

Existing Conditions Aggravated by Exposure: No information available

Additional toxicological information:

(Contd. on page 6)

SAFETY DATA SHEET

According to Safe Work Australia

Printing date 24.11.2015 Revision: 24.11.2015

Product Name: GENFARM THIRAM 600 FUNGICIDE

(Contd. of page 5)

The Australian Acceptable Daily Intake (ADI) for thiram for a human is 0.004 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 0.4 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: Comm. Dept. of Health and Ageing Office of Chemical Safety, 'ADI List', June 2014).

12 . ECOLOGICAL INFORMATION

Ecotoxicity: Thiram is non toxic to birds and bees.

Aquatic toxicity:
Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.
Thiram:
LC50 0.23 mg/L (bluegill)
LC50 0.13 mg/L (trout)
LC50 4 mg/L (carp)

Persistence and Degradability:
Thiram is moderately persistent in soils. The half-life in soil is 15 days. Thiram degrades faster in acidic soils than in neutral or alkaline soils, and degrades faster in soils with higher levels of organic matter.

Bioaccumulative Potential: Thiram is not expected to bioaccumulate.

Mobility in Soil:
Thiram is not water soluble and has a strong tendency to adsorb to soil particlues. Thiram has low soil mobility and is not expected to leach.
Other adverse effects: No 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	
ADG	Not regulated
IMDG, IATA	UN3082
Proper Shipping Name	
ADG	Not regulated
IMDG, IATA	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Dangerous Goods Class	
ADG Class:	Not regulated
IMDG Class:	9 Miscellaneous dangerous substances and articles.
Packing Group:	
ADG	Not regulated
IMDG, IATA	III
Marine pollutant:	Yes Symbol (fish and tree)
EMS Number:	F-A,S-F
Hazchem Code:	.3Z

(Contd. on page 7)

SAFETY DATA SHEET

According to Safe Work Australia

Printing date 24.11.2015 Revision: 24.11.2015

Product Name: GENFARM THIRAM 600 FUNGICIDE

(Contd. of page 6)

Special Provisions:	179, 274, 331, 335, AU01
Limited Quantities:	5L
Packagings & IBCs - Packing Instruction:	P001, IBC03, LP01
Packagings & IBCs - Special Packing Provisions:	PP1
Portable Tanks & Bulk Containers - Instructions:	T4
Portable Tanks & Bulk Containers - Special Provisions:	TP1, TP29

15 . REGULATORY INFORMATION

Australian Inventory of Chemical Substances:

137-26-8	thiram

Standard for the Uniform Scheduling of Drugs and Poisons (SUSMP) - Poison Schedule:
Poisons Schedule: 6

16 . OTHER INFORMATION

Date of Preparation or Last Revision: 24.11.2015

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

Abbreviations and acronyms:
ADG: Australian Dangerous Goods
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
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)

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 - December 2011”
The information contained in this safety data sheet is provided in good faith and is believed to be accurate at the date of issuance.Landmark Operations Limited makes no representation of the accuracy or comprehensiveness of the information and to the full extent allowed by law excludes all liability for any loss or damage related to the supply or use of the information in this material safety data sheet. MSDS.COM.AU Pty Ltd is not in a position to warrant the accuracy of the data herein. The user is cautioned to make their own determinations as to the suitability of the information provided to the particular circumstances in which the product is used.