

PENNMAG TURF HERBICIDE

Version 4.0	Revision Date: 31.07.2025	SDS Number: S00031071716	Date of last issue: 12.10.2021 Date of first issue: 12.10.2021
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SECTION 1: IDENTIFICATION

Product name : PENNMAG TURF HERBICIDE

Design code : A9396B

Manufacturer or supplier's detailsCompany : Syngenta Australia Pty Ltd (ABN 33 002 933 717)
www.syngenta.com.auAddress : 2 Lyonpark Road
Macquarie Park NSW 2113
Australia

Telephone : (02) 8014 5200

Emergency telephone number : 13 11 26 (Poison Information Centre)
1800 033 111 (Syngenta)

Telefax : (02) 8876 8446

Recommended use of the chemical and restrictions on use

Recommended use : Herbicide

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**

Acute toxicity (Inhalation) : Category 4

Serious eye damage/eye irritation : Category 2A

Skin sensitisation : Category 1

Carcinogenicity : Category 2

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H351 Suspected of causing cancer.

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Precautionary statements

:

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing mist or vapours.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture

: Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
S-metolachlor	87392-12-9	>= 60 -<= 100
Amines, tallow alkyl, ethoxylated, compds. with polyethylene glycol hydrogen sulfate nonylphenyl ether	148373-01-7	>= 3 -< 10
Hydrocarbons, C10, aromatics, >1% naphtha-	64742-94-5	>= 1 -< 10

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SECTION 4. FIRST AID MEASURES

- | | | |
|---|---|--|
| General advice | : | Have the product container, label or Safety Data Sheet with you when calling the emergency number, a poison control center or physician, or going for treatment. |
| If inhaled | : | Move the victim to fresh air.
If breathing is irregular or stopped, administer artificial respiration.
Keep patient warm and at rest. |
| In case of skin contact | : | Take off all contaminated clothing immediately.
Wash off immediately with plenty of water.
If skin irritation persists, call a physician.
Wash contaminated clothing before re-use. |
| In case of eye contact | : | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Remove contact lenses.
Immediate medical attention is required. |
| If swallowed | : | If swallowed, seek medical advice immediately and show this container or label.
Do not induce vomiting: contains petroleum distillates and/or aromatic solvents. |
| Most important symptoms and effects, both acute and delayed | : | Aspiration may cause pulmonary oedema and pneumonitis. |
| Notes to physician | : | There is no specific antidote available.
Treat symptomatically.
Do not induce vomiting: contains petroleum distillates and/or aromatic solvents. |

SECTION 5. FIREFIGHTING MEASURES

- | | | |
|---------------------------------------|---|--|
| Suitable extinguishing media | : | Extinguishing media - small fires
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Extinguishing media - large fires
Alcohol-resistant foam
or
Water spray |
| Unsuitable extinguishing media | : | Do not use a solid water stream as it may scatter and spread fire. |
| Specific hazards during fire-fighting | : | As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10).
Exposure to decomposition products may be a hazard to health. |

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Hazardous combustion products	: Carbon oxides Nitrogen oxides (NOx) Chlorine compounds Sulphur oxides
Specific extinguishing methods	: Do not allow run-off from fire fighting to enter drains or water courses. Cool closed containers exposed to fire with water spray.
Special protective equipment for firefighters	: Wear full protective clothing and self-contained breathing apparatus.
Hazchem Code	: •3Z

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Refer to protective measures listed in sections 7 and 8.
Environmental precautions	: Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Clean contaminated surface thoroughly. Clean with detergents. Avoid solvents. Retain and dispose of contaminated wash water.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	: No special protective measures against fire required. Avoid contact with skin and eyes. When using do not eat, drink or smoke. For personal protection see section 8.
Conditions for safe storage	: No special storage conditions required. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep away from food, drink and animal feedingstuffs.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

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Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
S-metolachlor	87392-12-9	TWA	5 mg/m3	Syngenta

Engineering measures : THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION AND PACKAGING OF THE PRODUCT. FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated.

The extent of these protection measures depends on the actual risks in use.

Maintain air concentrations below occupational exposure standards.

Where necessary, seek additional occupational hygiene advice.

Personal protective equipment

Respiratory protection : When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Suitable respiratory equipment:
Respirator with a half face mask
The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.

Hand protection

Material : Nitrile rubber
Break through time : > 480 min
Glove thickness : 0.5 mm

Remarks : Wear protective gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case. Gloves should be discarded and replaced if there is any indication of degradation or chemical breakthrough.

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Eye protection	:	Tightly fitting safety goggles Always wear eye protection when the potential for inadvertent eye contact with the product cannot be excluded.
Skin and body protection	:	Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Remove and wash contaminated clothing before re-use. Wear as appropriate: Impervious clothing
Protective measures	:	The use of technical measures should always have priority over the use of personal protective equipment. When selecting personal protective equipment, seek appropriate professional advice. Personal protective equipment should comply with relevant national standards

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	clear, liquid
Colour	:	yellowish to brown
Odour	:	Weak, uncharacteristic
Odour Threshold	:	No data available
pH	:	5.2 Concentration: 1 %w/v
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	120 °C Method: Pensky-Martens closed cup
Evaporation rate	:	No data available
Flammability (solid, gas)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available

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Density : 1.104 g/cm³

Solubility(ies)
Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Auto-ignition temperature : 430 °C

Decomposition temperature : No data available

Viscosity
Viscosity, dynamic : 110.7 mPa,s (20 °C)
34.98 mPa,s (40 °C)

Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Surface tension : 31.8 mN/m, 10.000 g/l, 20 °C

Particle characteristics
Particle size : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : None reasonably foreseeable.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : No dangerous reaction known under conditions of normal use.

Conditions to avoid : No decomposition if used as directed.

Incompatible materials : None known.

Hazardous decomposition products : No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Exposure routes : Ingestion
Inhalation
Skin contact
Eye contact

Acute toxicity**Product:**

Acute oral toxicity : LD50 (Rat, male and female): 2,267 mg/kg

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Acute inhalation toxicity : LC50 (Rat, male and female): 4.06 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance/mixture is not toxic on inhalation as defined by dangerous goods regulations.

Acute dermal toxicity : LD50 (Rabbit, male and female): > 2,020 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Components:**S-metolachlor:**

Acute oral toxicity : LD50 (Rat, male and female): 2,672 mg/kg

Acute inhalation toxicity : LC50 (Rat, male and female): > 2.91 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

LC50 (Rat, male and female): > 4.33 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity
The value is given in analogy to the following substances:
metolachlor

Acute dermal toxicity : LD50 (Rabbit, male and female): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Amines, tallow alkyl, ethoxylated, compds. with polyethylene glycol hydrogen sulfate nonylphenyl ether :

Acute oral toxicity : Assessment: The component/mixture is moderately toxic after single ingestion.

Skin corrosion/irritation**Product:**

Species : Rabbit
Result : No skin irritation

Components:**S-metolachlor:**

Species : Rabbit
Result : No skin irritation

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Amines, tallow alkyl, ethoxylated, compds. with polyethylene glycol hydrogen sulfate nonylphenyl ether :

Result : Irritating to skin.

Serious eye damage/eye irritation**Product:**

Species : Rabbit
Result : Eye irritation

Components:**S-metolachlor:**

Species : Rabbit
Result : No eye irritation

Amines, tallow alkyl, ethoxylated, compds. with polyethylene glycol hydrogen sulfate nonylphenyl ether :

Result : Irreversible effects on the eye

Respiratory or skin sensitisation**Product:**

Test Type : Maximisation Test
Species : Guinea pig
Result : May cause sensitisation by skin contact.

Components:**S-metolachlor:**

Species : Guinea pig
Result : May cause sensitisation by skin contact.

Chronic toxicity**Germ cell mutagenicity****Components:****S-metolachlor:**

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

Carcinogenicity**Components:****S-metolachlor:**

Carcinogenicity - Assess- : No evidence of carcinogenicity in animal studies.

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Hydrocarbons, C10, aromatics, >1% naphthalene:

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies

Reproductive toxicity**Components:****S-metolachlor:**

Reproductive toxicity - Assessment : No toxicity to reproduction
No effects on or via lactation

STOT - single exposure**Components:****Hydrocarbons, C10, aromatics, >1% naphthalene:**

Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

STOT - repeated exposure**Components:****S-metolachlor:**

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration toxicity**Components:****Hydrocarbons, C10, aromatics, >1% naphthalene:**

May be fatal if swallowed and enters airways.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 4.3 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna Straus): 24.0 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic : ErC50 (Raphidocelis subcapitata (freshwater green alga)):

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plants 0.058 mg/l
Exposure time: 72 h

NOEC (Raphidocelis subcapitata (freshwater green alga)):
0.021 mg/l
End point: Growth rate
Exposure time: 72 h

Components:

S-metolachlor:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 12 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Americamysis): 1.4 mg/l Exposure time: 96 h
Toxicity to algae/aquatic plants	:	ErC50 (Raphidocelis subcapitata (freshwater green alga)): 0.056 mg/l Exposure time: 72 h
		EC10 (Raphidocelis subcapitata (freshwater green alga)): 0.014 mg/l End point: Growth rate Exposure time: 72 h
		ErC50 (Elodea canadensis (Canadian waterweed)): 0.062 mg/l Exposure time: 7 d
		NOEC (Lemna gibba (gibbous duckweed)): 0.00384 mg/l Exposure time: 7 d
Toxicity to fish (Chronic toxicity)	:	EC10 (Pimephales promelas (fathead minnow)): 0.22 mg/l Exposure time: 35 d
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Americamysis): 0.13 mg/l Exposure time: 28 d

Amines, tallow alkyl, ethoxylated, compds. with polyethylene glycol hydrogen sulfate nonylphenyl ether :

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Hydrocarbons, C10, aromatics, >1% naphthalene:

Ecotoxicology Assessment

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Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

Persistence and degradability**Components:****S-metolachlor:**

Biodegradability : Result: Not readily biodegradable.

Stability in water : Degradation half life: 53 - 147 d
Remarks: Product is not persistent.

Bioaccumulative potential**Components:****S-metolachlor:**

Bioaccumulation : Remarks: Does not bioaccumulate.

Partition coefficient: n-octanol/water : log Pow: 3.05 (25 °C)

Mobility in soil**Components:****S-metolachlor:**

Distribution among environmental compartments : Remarks: Moderately mobile in soils

Stability in soil : Dissipation time: 12 - 46 d
Percentage dissipation: 50 % (DT50)
Remarks: Product is not persistent.

Other adverse effects**Components:****S-metolachlor:**

Results of PBT and vPvB assessment : Substance is not persistent, bioaccumulative, and toxic (PBT).

Endocrine disrupting potential : Substance does not have endocrine disrupting properties.

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : Do not contaminate ponds, waterways or ditches with chemical or used container.
Do not dispose of waste into sewer.
Where possible recycling is preferred to disposal or incineration.

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Contaminated packaging : If recycling is not practicable, dispose of in compliance with local regulations.

: Non-returnable containers:
Triple rinse containers.
Add rinsings to spray tank

If recycling, replace cap and return clean containers to recycler or designated collection point. Containers marked with the drumMUSTER container logo can be taken to a drumMUSTER collection site (02 6206 6868, www.drummuster.org.au). Empty containers can be landfilled, when in accordance with the local regulations.

If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

Returnable containers:
Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number : UN 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(S-METOLACHLOR)

Class : 9

Packing group : III

Labels : 9

Environmentally hazardous : yes

Remarks : This product can be subject to exemptions when packaged in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids, or having a net mass of 5 kg or less for solids.

IATA-DGR

UN/ID No. : UN 3082

Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.
(S-METOLACHLOR)

Class : 9

Packing group : III

Labels : Miscellaneous

Packing instruction (cargo aircraft) : 964

Packing instruction (passenger aircraft) : 964

Environmentally hazardous : yes

Remarks : This product can be subject to exemptions when packaged in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids, or having a

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net mass of 5 kg or less for solids.

IMDG-Code

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (S-METOLACHLOR)
Class	:	9
Packing group	:	III
Labels	:	9
EmS Code	:	F-A, S-F
Marine pollutant	:	yes
Remarks	:	This product can be subject to exemptions when packaged in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids, or having a net mass of 5 kg or less for solids.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

ADG

UN number	:	UN 3082
Proper shipping name	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (S-METOLACHLOR)
Class	:	9
Packing group	:	III
Labels	:	9
Hazchem Code	:	•3Z
Environmentally hazardous	:	yes
Remarks	:	Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 are not subject to the Australian Dangerous Goods Code when transported by road or rail in: packagings, IBC's, or any other receptacle not exceeding 500 kg / 500 litres.

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

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

Therapeutic Goods (Poisons	:	Schedule 5
Standard) Instrument		
Prohibition/Licensing Requirements	:	There is no applicable prohibition, authorisation and restricted use requirements, including for carcino-

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Product Registration Number

gens referred to in Schedule 10 of the model WHS Act and Regulations.

: APVMA Approval No. 69865

SECTION 16: ANY OTHER RELEVANT INFORMATION

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Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Date format : dd.mm.yyyy

Full text of other abbreviations

Syngenta : Syngenta Occupational Exposure Limit

Syngenta / TWA : Time weighted average

AIIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

AU / 6N