

# SAFETY DATA SHEET

## DOW AGROSCIENCES SOUTHERN AFRICA PTY LTD

**Product name:** TRACER™ 480 SC

**Issue Date:** 26.01.2020

**Print Date:** 29.04.2020

DOW AGROSCIENCES SOUTHERN AFRICA PTY LTD encourages you and expects you to read and understand the entire SDS as there is important information throughout the document. This SDS provides users with information relating to the protection of human health and safety at the workplace, protection of the environment and supports emergency response. Product users and applicators should primarily refer to the product label attached to or accompanying the product container.

---

### 1. PRODUCT AND COMPANY IDENTIFICATION

---

**Product name:** TRACER™ 480 SC

**Recommended use of the chemical and restrictions on use**

**Identified uses:** Plant Protection Product

#### COMPANY IDENTIFICATION

DOW AGROSCIENCES SOUTHERN AFRICA PTY LTD  
GROUND FLOOR MAGWA BUILDING  
MAXWELL OFFICE PARK MAGWA CRESCENT  
MIDRAND  
1686  
SOUTH AFRICA

**Customer Information Number:**

SDS@corteva.com

#### EMERGENCY TELEPHONE NUMBER

**24-Hour Emergency Contact:** +32 3 575 55 55

**Local Emergency Contact:** +27 82 895 0621

---

### 2. HAZARDS IDENTIFICATION

---

#### Classification of the substance or mixture

Short-term (acute) aquatic hazard - Category 1 - H400

Long-term (chronic) aquatic hazard - Category 1 - H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

#### Label elements

#### Hazard pictograms



**Signal word: WARNING**

**Hazard statements**

H410 Very toxic to aquatic life with long lasting effects.

**Precautionary statements**

P391 Collect spillage.

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

**Supplemental information**

EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

EUH208 Contains: 1,2-Benzisothiazolin-3-one. May produce an allergic reaction.

**Other hazards**

This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT).

This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

---

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

---

This product is a mixture.

CASRN / EC-No. / Index-No.	Concentration	Component	Classification
CASRN 168316-95-8 EC-No. 434-300-1 Index-No. 603-209-00-0	44,0%	Spinosad	Aquatic Acute - 1 - H400 Aquatic Chronic - 1 - H410
CASRN 57-55-6 EC-No. 200-338-0 Index-No. —	>= 3,0 - < 10,0 %	Propylene glycol	Not classified

For the full text of the H-Statements mentioned in this Section, see Section 16.

*Note*

Spinosad is comprised of Spinosyn A (CAS # 131929-60-7) and Spinosyn D (CAS # 131929-63-0)

---

## 4. FIRST AID MEASURES

---

### Description of first aid measures

#### General advice:

If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice.

**Skin contact:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**Eye contact:** Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center or doctor for treatment advice.

**Ingestion:** No emergency medical treatment necessary.

#### Most important symptoms and effects, both acute and delayed:

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

#### Indication of any immediate medical attention and special treatment needed

**Notes to physician:** No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.

---

## 5. FIREFIGHTING MEASURES

---

**Suitable extinguishing media:** To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical or foam. Water spray Alcohol-resistant foam

**Unsuitable extinguishing media:** None known.

#### Special hazards arising from the substance or mixture

**Hazardous combustion products:** Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds. Combustion products may include and are not limited to: Nitrogen oxides. Carbon monoxide. Carbon dioxide.

**Unusual Fire and Explosion Hazards:** This material will not burn until the water has evaporated. Residue can burn. If exposed to fire from another source and water is evaporated, exposure to high temperatures may cause toxic fumes. Exposure to combustion products may be a hazard to health. Do not allow run-off from fire fighting to enter drains or water courses.

#### Advice for firefighters

**Fire Fighting Procedures:** Keep people away. Isolate fire and deny unnecessary entry. To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical or foam. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this

(M)SDS. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Remove undamaged containers from fire area if it is safe to do so. Evacuate area. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers.

**Special protective equipment for firefighters:** Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). If protective equipment is not available or not used, fight fire from a protected location or safe distance. Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.

---

## 6. ACCIDENTAL RELEASE MEASURES

---

**Personal precautions, protective equipment and emergency procedures:** Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to section 7, Handling, for additional precautionary measures. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

**Environmental precautions:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. Spills or discharge to natural waterways is likely to kill aquatic organisms. If the product contaminates rivers and lakes or drains inform respective authorities. Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained. Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

**Methods and materials for containment and cleaning up:** Contain spilled material if possible. Small spills: Absorb with materials such as: Clay. Dirt. Sand. Sweep up. Collect in suitable and properly labeled containers. Large spills: Contact the company for clean-up assistance. See Section 13, Disposal Considerations, for additional information. Clean up remaining materials from spill with suitable absorbant. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in. For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, Recovered material should be stored in a vented container. The vent must prevent the ingress of water as further reaction with spilled materials can take place which could lead to overpressurization of the container. Keep in suitable, closed containers for disposal. Wipe up with absorbent material (e.g. cloth, fleece). Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). See Section 13, Disposal Considerations, for additional information. See sections: 7, 8, 11, 12 and 13.

---

## 7. HANDLING AND STORAGE

---

**Precautions for safe handling:** Keep out of reach of children. Do not swallow. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or mist. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation.

Do not breathe vapours/dust. Handle in accordance with good industrial hygiene and safety practice. Smoking, eating and drinking should be prohibited in the application area. Take care to prevent spills,

waste and minimize release to the environment. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

**Conditions for safe storage:** Store in a dry place. Store in original container. Keep container tightly closed when not in use. Do not store near food, foodstuffs, drugs or potable water supplies. Store in a closed container. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep in properly labelled containers. Store in accordance with the particular national regulations.

Do not store with the following product types: Strong oxidizing agents.  
Unsuitable materials for containers: None known.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value/Notation
Spinosad	Dow IHG	TWA	0,3 mg/m3
Propylene glycol	US WEEL	TWA	10 mg/m3
	ZA OEL	TWA OEL-RL particulate	10 mg/m3
	ZA OEL	TWA OEL-RL Vapour + particulates	470 mg/m3 150 ppm

RECOMMENDATIONS IN THIS SECTION ARE FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD SEE THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.

### Exposure controls

**Engineering controls:** Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

### Individual protection measures

**Eye/face protection:** Use safety glasses (with side shields). Safety glasses (with side shields) should be consistent with EN 166 or equivalent.

#### Skin protection

**Hand protection:** Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Butyl rubber. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. Avoid gloves made of: Polyvinyl alcohol ("PVA"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 4 or higher (breakthrough time greater than 120 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 1 or higher (breakthrough time greater than 10 minutes according to EN 374) is recommended. Glove thickness

alone is not a good indicator of the level of protection a glove provides against a chemical substance as this level of protection is also highly dependent on the specific composition of the material that the glove is fabricated from. The thickness of the glove must, depending on model and type of material, generally be more than 0.35 mm to offer sufficient protection for prolonged and frequent contact with the substance. As an exception to this general rule it is known that multilayer laminate gloves may offer prolonged protection at thicknesses less than 0.35 mm. Other glove materials with a thickness of less than 0.35 mm may offer sufficient protection when only brief contact is expected. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

**Other protection:** Wear clean, body-covering clothing.

**Respiratory protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator. Use the following CE approved air-purifying respirator: Organic vapor cartridge with a particulate pre-filter, type AP2 (meeting standard EN 14387).

---

## 9. PHYSICAL AND CHEMICAL PROPERTIES

---

### Appearance

Physical state	Liquid.
Color	Off-white
Odor	Mild
Odor Threshold	No test data available
pH	7,52 <i>CIPAC MT 75.1</i> (neat)
Melting point/range	Not applicable
Freezing point	No data available
Boiling point (760 mmHg)	No test data available
Flash point	<b>closed cup</b> > 100 °C <i>EC Method A9</i> none below boiling point
Evaporation Rate (Butyl Acetate = 1)	No test data available
Flammability (solid, gas)	Not applicable to liquids
Lower explosion limit	No test data available
Upper explosion limit	No test data available
Vapor Pressure	No test data available
Relative Vapor Density (air = 1)	No test data available
Relative Density (water = 1)	1,09 at 20 °C <i>Unspecified</i>
Water solubility	Dispersible
Partition coefficient: n-octanol/water	No data available

<b>Auto-ignition temperature</b>	<i>EC Method A15</i> none below 400 degC
<b>Decomposition temperature</b>	No test data available
<b>Dynamic Viscosity</b>	134,6 mPa.s at 20 °C
<b>Kinematic Viscosity</b>	No test data available
<b>Explosive properties</b>	No <i>EEC A14</i>
<b>Oxidizing properties</b>	No
<b>Liquid Density</b>	1,09 g/cm <sup>3</sup> at 20 °C <i>Calculated.</i>
<b>Molecular weight</b>	No data available
<b>Surface tension</b>	43 mN/m

NOTE: The physical data presented above are typical values and should not be construed as a specification.

---

## 10. STABILITY AND REACTIVITY

---

**Reactivity:** No dangerous reaction known under conditions of normal use. Not classified as a reactivity hazard.

**Chemical stability:** Thermally stable at recommended temperatures and pressures. No decomposition if stored and applied as directed. Stable under normal conditions.

**Possibility of hazardous reactions:** None known.  
Polymerization will not occur.  
No hazards to be specially mentioned.

**Conditions to avoid:** Active ingredient decomposes at elevated temperatures.  
None known.

**Incompatible materials:** None known. None.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Carbon monoxide. Carbon dioxide. Nitrogen oxides.

---

## 11. TOXICOLOGICAL INFORMATION

---

*Toxicological information appears in this section when such data is available.*

### Acute toxicity

#### Acute oral toxicity

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

Based on information for a similar material:  
LD50, Rat, > 5 000 mg/kg

#### Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Based on information for a similar material:

LD50, Rabbit, > 5 000 mg/kg

**Acute inhalation toxicity**

No adverse effects are anticipated from single exposure to mist. For respiratory irritation and narcotic effects: Relevant data not available.

For similar material(s):

LC50, Rat, 4 Hour, Aerosol, > 5,0 mg/l

**Skin corrosion/irritation**

Prolonged contact may cause slight skin irritation with local redness.

**Serious eye damage/eye irritation**

May cause slight eye irritation.

Corneal injury is unlikely.

May cause pain disproportionate to the level of irritation to eye tissues.

**Sensitization**

For the active ingredient(s):

Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:

No relevant data found.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

For the active ingredient(s):

In animals, Spinosad has been shown to cause vacuolization of cells in various tissues.

Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use.

In rare cases, repeated excessive exposure to propylene glycol may cause central nervous system effects.

For the minor component(s):

In animals, effects have been reported on the following organs:

lung

**Carcinogenicity**

For the active ingredient(s): Did not cause cancer in laboratory animals.

**Teratogenicity**

For the active ingredient(s): Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

**Reproductive toxicity**

For the active ingredient(s): In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals.

**Mutagenicity**

For the active ingredient(s): In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.



**Aspiration Hazard**

Based on physical properties, not likely to be an aspiration hazard.

---

---

**12. ECOLOGICAL INFORMATION**

---

---

*Ecotoxicological information appears in this section when such data is available.*

**Toxicity****Acute toxicity to fish**

For similar material(s):

Material is very toxic to aquatic organisms (LC50/EC50/IC50 below 1 mg/L in the most sensitive species).

For similar material(s):

LC50, Cyprinus carpio (Carp), 96 Hour, > 100 mg/l

For similar material(s):

LC50, Danio rerio (zebra fish), 96 Hour, > 120 mg/l

**Acute toxicity to aquatic invertebrates**

As product:

EC50, Daphnia magna (Water flea), semi-static test, 48 Hour, 19 mg/l, OECD Test Guideline 211 or Equivalent

**Acute toxicity to algae/aquatic plants**

EbC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, > 100 mg/l

EbC50, diatom Navicula sp., 120 Hour, Biomass, 0,667 mg/l

EC50, diatom Navicula sp., 72 Hour, Growth rate, 0,86 mg/l, OECD Test Guideline 201

**Toxicity to Above Ground Organisms**

oral LD50, Apis mellifera (bees), 48 Hour, 0,049micrograms/bee

contact LD50, Apis mellifera (bees), 48 Hour, 0,05micrograms/bee

**Toxicity to soil-dwelling organisms**

LC50, Eisenia fetida (earthworms), Based on information for a similar material:, 14 d, > 458 mg/kg

LC50, Eisenia fetida (earthworms), 56 d, > 291 mg/kg

**Persistence and degradability****Spinosad**

**Biodegradability:** Surface photodegradation is expected with exposure to sunlight. Material is not readily biodegradable according to OECD/EEC guidelines.

10-day Window: Fail

**Biodegradation:** < 1 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301B or Equivalent

**Stability in Water (1/2-life)**

Hydrolysis, pH 5, Half-life Temperature 25 °C, Stable

Hydrolysis, pH 7, Half-life Temperature 25 °C, Stable

Hydrolysis, half-life, 200 - 259 d, pH 9, Half-life Temperature 25 °C

Hydrolysis, half-life, 0,84 - 0,96 d, pH 7

**Propylene glycol**

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Biodegradation may occur under anaerobic conditions (in the absence of oxygen).

10-day Window: Pass

**Biodegradation:** 81 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 301F or Equivalent

10-day Window: Not applicable

**Biodegradation:** 96 %

**Exposure time:** 64 d

**Method:** OECD Test Guideline 306 or Equivalent

**Bioaccumulative potential****Spinosad**

**Bioaccumulation:** For similar active ingredient(s). Spinosyn A. Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).

**Partition coefficient: n-octanol/water(log Pow):** 4,01

**Bioconcentration factor (BCF):** 114 Oncorhynchus mykiss (rainbow trout)

**Propylene glycol**

**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** -1,07 Measured

**Bioconcentration factor (BCF):** 0,09 Estimated.

**Mobility in soil****Spinosad**

For similar material(s):

Spinosyn A.

Expected to be relatively immobile in soil (Koc > 5000).

**Partition coefficient (Koc):** 35024

**Propylene glycol**

Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

Potential for mobility in soil is very high (Koc between 0 and 50).

**Partition coefficient (Koc):** < 1 Estimated.

**Results of PBT and vPvB assessment****Spinosad**

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

**Propylene glycol**

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

#### Other adverse effects

#### Spinosad

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

#### Propylene glycol

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

---

### 13. DISPOSAL CONSIDERATIONS

---

**Disposal methods:** If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

---

### 14. TRANSPORT INFORMATION

---

#### Classification for ROAD and Rail transport:

<b>Proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(spinosad)
<b>UN number</b>	UN 3082
<b>Class</b>	9
<b>Packing group</b>	III
<b>Environmental hazards</b>	spinosad

#### Classification for SEA transport (IMO-IMDG):

<b>Proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(spinosad)
<b>UN number</b>	UN 3082
<b>Class</b>	9
<b>Packing group</b>	III
<b>Marine pollutant</b>	spinosad
<b>Transport in bulk</b>	Consult IMO regulations before transporting ocean bulk

according to Annex I or II  
of MARPOL 73/78 and the  
IBC or IGC Code

**Classification for AIR transport (IATA/ICAO):**

**Proper shipping name** Environmentally hazardous substance, liquid, n.o.s.(spinosad)  
**UN number** UN 3082  
**Class** 9  
**Packing group** III

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

---

## 15. REGULATORY INFORMATION

---

**Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.**

Listed in Regulation: ENVIRONMENTAL HAZARDS  
Number in Regulation: E1

100 t  
200 t

Classification and labeling have been performed according to Regulation (EC) No 1272/2008.

---

## 16. OTHER INFORMATION

---

**Full text of H-Statements referred to under sections 2 and 3.**

H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.

**Revision**

Identification Number: 322602 / A290 / Issue Date: 26.01.2020 / Version: 5.2  
DAS Code: GF-976

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

**Legend**

Dow IHG	Dow Industrial Hygiene Guideline
TWA	8-hr TWA
TWA OEL-RL	Long term occupational exposure limits - recommended limit
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)

ZA OEL	South Africa. Hazardous Chemical Substances Regulations, Occupational Exposure Limits
Aquatic Acute	Short-term (acute) aquatic hazard
Aquatic Chronic	Long-term (chronic) aquatic hazard

#### Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; 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; 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; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance 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

#### Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

DOW AGROSCIENCES SOUTHERN AFRICA PTY LTD urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for

(M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

ZA