

# SAFETY DATA SHEET

DOW AGROSCIENCES LIMITED

Safety Data Sheet according to Reg. (EU) No 2015/830

**Product name:** TRANSFORM™ WG Insecticide

**Revision Date:** 22.06.2017

**Version:** 3.0

**Print Date:** 22.06.2017

DOW AGROSCIENCES LIMITED 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.

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## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

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### 1.1 Product identifier

**Product name:** TRANSFORM™ WG Insecticide

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

**Identified uses:** Plant Protection Product Insecticide

### 1.3 Details of the supplier of the safety data sheet

#### COMPANY IDENTIFICATION

DOW AGROSCIENCES LIMITED

CPC2 CAPITAL PARK

FULBOURN

CAMBRIDGE

England

CB21 5XE

UNITED KINGDOM

**Customer Information Number:**

SDSQuestion@dow.com

### 1.4 EMERGENCY TELEPHONE NUMBER

**24-Hour Emergency Contact:** 0031 115 694 982

**Local Emergency Contact:** 00 31 115 69 4982

**National Poisons Information Centre (Beaumont Hospital):** 01 809 2166 (8 AM - 10 PM)

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## SECTION 2: HAZARDS IDENTIFICATION

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### 2.1 Classification of the substance or mixture

#### Classification according to Regulation (EC) No 1272/2008:

Acute aquatic toxicity - Category 1 - H400

Chronic aquatic toxicity - Category 1 - H410

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

## 2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008:

### 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 a licensed waste disposal contractor or collection site except for empty clean triple rinsed containers which can be disposed of as non-hazardous waste.

### Supplemental information

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

## 2.3 Other hazards

No data available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.2 Mixtures

This product is a mixture.

CASRN / EC-No. / Index-No.	REACH Registration Number	Concentration	Component	Classification: REGULATION (EC) No 1272/2008
CASRN 946578-00-3 EC-No. Not available Index-No. 616-217-00-4	—	50.0%	sulfoxaflor (ISO)	Acute Tox. - 4 - H302 Aquatic Acute - 1 - H400 Aquatic Chronic - 1 - H410

<b>CASRN</b> 1332-58-7 <b>EC-No.</b> 310-194-1 <b>Index-No.</b> –	–	> 20.0 - < 30.0 %	Kaolin	Not classified
<b>CASRN</b> 9011-05-6 <b>EC-No.</b> – <b>Index-No.</b> –	–	> 10.0 - < 20.0 %	Urea, polymer with formaldehyde	Not classified
<b>CASRN</b> 137-20-2 <b>EC-No.</b> 205-285-7 <b>Index-No.</b> –	–	< 5.0 %	Sodium N-methyl-N-oleoyltaurine	Eye Irrit. - 2 - H319

If present in this product, any not classified components disclosed above for which no country specific OEL value(s) is(are) indicated under Section 8, are being disclosed as voluntarily disclosed components.

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

## SECTION 4: FIRST AID MEASURES

### 4.1 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. Suitable emergency eye wash facility should be available in work area.

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

**4.2 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.

**4.3 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.

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**SECTION 5: FIREFIGHTING MEASURES**

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**5.1 Extinguishing media**

**Suitable extinguishing media:** Water. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam.

**Unsuitable extinguishing media:** No data available

**5.2 Special hazards arising from the substance or mixture**

**Hazardous combustion products:** During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Nitrogen oxides. Carbon monoxide. Carbon dioxide.

**Unusual Fire and Explosion Hazards:** Do not permit dust to accumulate. When suspended in air dust can pose an explosion hazard. Minimize ignition sources. If dust layers are exposed to elevated temperatures, spontaneous combustion may occur. Dense smoke is produced when product burns.

**5.3 Advice for firefighters**

**Fire Fighting Procedures:** Keep people away. Isolate fire and deny unnecessary entry. Consider feasibility of a controlled burn to minimize environment damage. Foam fire extinguishing system is preferred because uncontrolled water can spread possible contamination. Soak thoroughly with water to cool and prevent re-ignition. Cool surroundings with water to localize fire zone. 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.

**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). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

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**SECTION 6: ACCIDENTAL RELEASE MEASURES**

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**6.1 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. Spilled material may cause a slipping hazard. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

**6.2 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.

**6.3 Methods and materials for containment and cleaning up:** Contain spilled material if possible. Small spills: Sweep up. Collect in suitable and properly labeled containers. Large spills: Contact Dow AgroSciences for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

**6.4 Reference to other sections:** References to other sections, if applicable, have been provided in the previous sub-sections.

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## SECTION 7: HANDLING AND STORAGE

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**7.1 Precautions for safe handling:** Keep away from heat, sparks and flame. Keep out of reach of children. Do not swallow. No smoking, open flames or sources of ignition in handling and storage area. Avoid contact with eyes, skin, and clothing. Avoid breathing dust or mist. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. Good housekeeping and controlling of dusts are necessary for safe handling of product. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

**7.2 Conditions for safe storage, including any incompatibilities:** Store in a dry place. Store in original container. Do not store near food, foodstuffs, drugs or potable water supplies.

**7.3 Specific end use(s):** Refer to product label.

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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### 8.1 Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
Kaolin	ACGIH	TWA Respirable fraction	2 mg/m <sup>3</sup>
	IE OEL	OELV - 8 hrs (TWA) Respirable dust	2 mg/m <sup>3</sup>

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.

### 8.2 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.

#### Individual protection measures

**Eye/face protection:** Use chemical goggles. Chemical goggles should be consistent with EN 166 or equivalent.

**Skin protection**

**Hand protection:** Chemical protective gloves should not be needed when handling this material. Consistent with general hygienic practice for any material, skin contact should be minimized.

**Other protection:** No precautions other than clean body-covering clothing should be needed.

**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.

### Environmental exposure controls

See SECTION 7: Handling and storage and SECTION 13: Disposal considerations for measures to prevent excessive environmental exposure during use and waste disposal.

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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### 9.1 Information on basic physical and chemical properties

#### Appearance

Physical state	Granules.
Color	White
Odor	Mild
Odor Threshold	No test data available
pH	7.05 1% CIPAC MT 75.1
Melting point/range	No test data available
Freezing point	Not applicable
Boiling point (760 mmHg)	Not applicable
Flash point	<b>closed cup</b> Not applicable
Evaporation Rate (Butyl Acetate = 1)	Not applicable
Flammability (solid, gas)	Does not sustain combustion. <i>Flammability (solids)</i>
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapor Pressure	Not applicable
Relative Vapor Density (air = 1)	Not applicable
Relative Density (water = 1)	No test data available
Water solubility	No test data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	<i>EC Method A16</i> none below 400 degC
Decomposition temperature	No test data available
Kinematic Viscosity	Not applicable
Explosive properties	Not explosive <i>Mechanical Impact @ 20.25 inches</i>

**Oxidizing properties** No significant increase (>5C) in temperature. *EPA OPPTS 830.6314 (Oxidizing or Reducing Action)*

## 9.2 Other information

**Bulk density** 0.42 g/cm<sup>3</sup> *CIPAC MT 33*

**Molecular weight** No data available

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

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## SECTION 10: STABILITY AND REACTIVITY

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**10.1 Reactivity:** No dangerous reaction known under conditions of normal use.

**10.2 Chemical stability:** Thermally stable at typical use temperatures.

**10.3 Possibility of hazardous reactions:** Polymerization will not occur.

**10.4 Conditions to avoid:** Exposure to elevated temperatures can cause product to decompose.

**10.5 Incompatible materials:** None known.

**10.6 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. Toxic gases.

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## SECTION 11: TOXICOLOGICAL INFORMATION

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

### 11.1 Information on toxicological effects

#### Acute toxicity

##### Acute oral toxicity

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

As product:

LD50, Rat, > 2,000 mg/kg No deaths occurred at this concentration.

##### Acute dermal toxicity

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

As product:

LD50, Rat, > 5,000 mg/kg No deaths occurred at this concentration.

##### Acute inhalation toxicity

Prolonged exposure is not expected to cause adverse effects. Based on the available data, respiratory irritation was not observed.

As product:

LC50, Rat, male and female, 4 Hour, dust/mist, > 5.35 mg/l OECD Test Guideline 403

**Skin corrosion/irritation**

Essentially nonirritating to skin.

**Serious eye damage/eye irritation**

May cause slight eye irritation.

May cause slight corneal injury.

**Sensitization**

Did not demonstrate the potential for contact allergy in mice.

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, effects have been reported on the following organs:

Liver.

**Carcinogenicity**

For the active ingredient(s): Has caused cancer in laboratory animals. However, the effects are species specific and are not relevant to humans. A risk assessment has been conducted for this product and has shown, that under normal handling, the minor components will not pose a hazard.

**Teratogenicity**

For the active ingredient(s): Has caused birth defects in lab animals at high doses. In laboratory animals, excessive doses toxic to the parent animals caused decreased weight and survival of offspring. However, the effects are species specific and are not relevant to humans. These concentrations exceed relevant human dose levels.

**Reproductive toxicity**

For the active ingredient(s): In animal studies, has been shown to interfere with reproduction.

However, the effects are species specific and are not relevant to humans. These concentrations exceed relevant human dose levels.

**Mutagenicity**

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

**Aspiration Hazard**

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

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## SECTION 12: ECOLOGICAL INFORMATION

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



## 12.1 Toxicity

### Acute toxicity to fish

LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 Hour, 19.5 mg/l, OECD Test Guideline 203 or Equivalent

### Acute toxicity to aquatic invertebrates

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

EC50, Midge (Chironomus riparius), static test, 96 Hour, 0.48 mg/l

EC50, Daphnia magna (Water flea), semi-static test, 48 Hour, > 100 mg/l, OECD Test Guideline 202 or Equivalent

### Acute toxicity to algae/aquatic plants

ErC50, diatom Navicula sp., Growth inhibition, 72 Hour, Growth rate inhibition, > 100 mg/l

### Toxicity to Above Ground Organisms

Material is slightly toxic to birds on an acute basis (LD50 between 501 and 2000 mg/kg).

oral LD50, Colinus virginianus (Bobwhite quail), 1655mg/kg bodyweight.

oral LD50, Apis mellifera (bees), 48 Hour, 0.153micrograms/bee

contact LD50, Apis mellifera (bees), 48 Hour, 0.224micrograms/bee

### Toxicity to soil-dwelling organisms

LC50, Eisenia fetida (earthworms), 14 d, survival, 1.050 mg/kg

## 12.2 Persistence and degradability

### sulfoxaflor (ISO)

**Biodegradability:** Material is not readily biodegradable according to OECD/EEC guidelines.

**Biodegradation:** 0 %

**Exposure time:** 28 d

**Method:** OECD Test Guideline 310

### Kaolin

**Biodegradability:** Biodegradation is not applicable.

### Urea, polymer with formaldehyde

**Biodegradability:** No relevant data found.

### Sodium N-methyl-N-oleoyltaurine

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

10-day Window: Pass

**Biodegradation:** 80 %

**Exposure time:** 28 d

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

### 12.3 Bioaccumulative potential

#### sulfoxaflor (ISO)

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

**Partition coefficient: n-octanol/water(log Pow):** 0.802 at 20 °C Measured

#### Kaolin

**Bioaccumulation:** Partitioning from water to n-octanol is not applicable.

#### Urea, polymer with formaldehyde

**Bioaccumulation:** No data available for this product.

#### Sodium N-methyl-N-oleoyltaurine

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

**Partition coefficient: n-octanol/water(log Pow):** Pow: 1.36 at 20 °C

### 12.4 Mobility in soil

#### sulfoxaflor (ISO)

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

**Partition coefficient (Koc):** 40 Measured

#### Kaolin

No relevant data found.

#### Urea, polymer with formaldehyde

No relevant data found.

#### Sodium N-methyl-N-oleoyltaurine

No relevant data found.

### 12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Other adverse effects

#### sulfoxaflor (ISO)

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

#### Kaolin

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

#### Urea, polymer with formaldehyde

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

#### Sodium N-methyl-N-oleoyltaurine

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

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**SECTION 13: DISPOSAL CONSIDERATIONS**

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**13.1 Waste treatment 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.

The definitive assignment of this material to the appropriate EWC group and thus its proper EWC code will depend on the use that is made of this material. Contact the authorized waste disposal services.

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**SECTION 14: TRANSPORT INFORMATION**

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**Classification for ROAD and Rail transport (ADR/RID):**

14.1 UN number	UN 3077
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(Sulfoxaflor)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environmental hazards	Sulfoxaflor
14.6 Special precautions for user	Hazard Identification Number: 90

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

14.1 UN number	UN 3077
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.(Sulfoxaflor)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Environmental hazards	Sulfoxaflor
14.6 Special precautions for user	EmS: F-A, S-F
14.7 Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

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

14.1 UN number	UN 3077
14.2 UN proper shipping name	Environmentally hazardous substance, solid, n.o.s.(Sulfoxaflor)

- 14.3 Transport hazard class(es) 9  
14.4 Packing group III  
14.5 Environmental hazards Not applicable  
14.6 Special precautions for user No data available.

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.

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## SECTION 15: REGULATORY INFORMATION

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

#### REACH Regulation (EC) No 1907/2006

This product contains only components that have been either pre-registered, registered, are exempt from registration, are regarded as registered or are not subject to registration according to Regulation (EC) No. 1907/2006 (REACH). The aforementioned indications of the REACH registration status are provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. It is the buyer's/user's responsibility to ensure that his/her understanding of the regulatory status of this product is correct.

#### 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

#### Other regulations

Registration Number: PCS NO. 05342

### 15.2 Chemical safety assessment

For proper and safe use of this product, please refer to the approval conditions laid down on the product label.

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## SECTION 16: OTHER INFORMATION

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

H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

**Classification and procedure used to derive the classification for mixtures according to Regulation (EC) No 1272/2008**

Aquatic Acute - 1 - H400 - On basis of test data.

Aquatic Chronic - 1 - H410 - Calculation method

**Revision**

Identification Number: 101193916 / A293 / Issue Date: 22.06.2017 / Version: 3.0

DAS Code: GF-2372

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

**Legend**

ACGIH	USA. American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV)
IE OEL	Ireland. List of Chemical Agents and Occupational Exposure Limit Values - Schedule 1
OELV - 8 hrs (TWA)	Occupational exposure limit value (8-hour reference period)
TWA	8-hour, time-weighted average

**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 LIMITED 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.