SAFETY DATA SHEET

DOW AGROSCIENCES LIMITED

Safety Data Sheet according to Reg. (EU) No 453/2010

Product name: DOXSTAR™ PRO Herbicide

Revision Date: 20.08.2014
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DOW AGROSCIENCES LIMITED encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifiers
Product name: DOXSTAR™ PRO Herbicide

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Plant Protection Product

1.3 Details of the supplier of the safety data sheet
COMPANY IDENTIFICATION
DOW AGROSCIENCES LIMITED
LATCHMORE COURT
BRAND STREET
HITCHIN
England
SG5 1NH
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

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EU) 1272/2008 :
Skin sensitisation - Category 1 - H317
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.

Classification according to EU Directives 67/548/EEC or 1999/45/EC:
R43

Dangerous for the environment - R50/53
For the full text of the R-phrases mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS]:

Hazard pictograms

Signal word: WARNING

Hazard statements

H317	May cause an allergic skin reaction.
H410	Very toxic to aquatic life with long lasting effects.

Supplemental Hazard Statements

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

Precautionary statements

P280	Wear protective gloves/ protective clothing.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P333 + P313	If skin irritation or rash occurs: Get medical advice/ attention.
P391	Collect spillage.
P501	Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste.

Contains Triclopyr-2-butoxyethyl ester

2.3 Other hazards
no data available

3.2 Mixture

This product is a mixture.

CASRN / EC-No. / Index-No.	REACH Registration Number	Concentration	Component	Classification: REGULATION (EC) No 1272/2008
CASRN 81406-37-3 **EC-No.** 279-752-9 **Index-No.** 607-272-00-5	–	21.0%	fluroxypyr-meptyl (ISO)	Aquatic Acute - 1 - H400 Aquatic Chronic - 1 - H410
CASRN 64700-56-7 **EC-No.** 265-024-8 **Index-No.** –	–	19.7%	Triclopyr-2-butoxyethyl ester	Acute Tox. - 4 - H302 Skin Sens. - 1B - H317 Aquatic Acute - 1 - H400 Aquatic Chronic - 1 - H410
CASRN 26264-06-2 **EC-No.** 247-557-8 **Index-No.** –	–	< 5.0 %	Benzenesulfonic acid, dodecyl-, calcium salt	Acute Tox. - 4 - H302 Skin Irrit. - 2 - H315 Eye Dam. - 1 - H318
CASRN 78-83-1 **EC-No.** 201-148-0 **Index-No.** 603-108-00-1	01-2119484609-23	< 5.0 %	2-Methylpropan-1-ol; iso-butanol	Flam. Liq. - 3 - H226 Skin Irrit. - 2 - H315 Eye Dam. - 1 - H318 STOT SE - 3 - H335

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

CASRN / EC-No. / Index-No.	Concentration	Component	Classification: 67/548/EEC
CASRN 81406-37-3 **EC-No.** 279-752-9 **Index-No.** 607-272-00-5	21.0%	fluroxypyr-meptyl (ISO)	N - R50 - R53
CASRN 64700-56-7 **EC-No.** 265-024-8	19.7%	Triclopyr-2-butoxyethyl ester	Xn - R22 R43 N - R50/53

Index-No. –			
CASRN 26264-06-2 **EC-No.** 247-557-8 **Index-No.** –	< 5.0 %	Benzenesulfonic acid, dodecyl-, calcium salt	Xi - R38 - R41 Xn - R22
CASRN 78-83-1 **EC-No.** 201-148-0 **Index-No.** 603-108-00-1	< 5.0 %	2-Methylpropan-1-ol; iso-butanol	R10 Xi - R37/38 - R41 R67

For the full text of the R-phrases mentioned in this Section, see Section 16.

SECTION 4. FIRST AID MEASURES

4.1 Description of first aid measures
General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). 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. Wash skin with soap and plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Wash clothing before reuse. Shoes and other leather items which cannot be decontaminated should be disposed of properly.

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: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Never give anything by mouth to an unconscious person.

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: Skin contact may aggravate preexisting dermatitis. 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.

SECTION 5. FIREFIGHTING MEASURES

5.1 Extinguishing media
Suitable extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

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. Hydrogen chloride. Carbon monoxide. Carbon dioxide. Combustion products may include trace amounts of: Phosgene.

Unusual Fire and Explosion Hazards: Violent steam generation or eruption may occur upon application of direct water stream to hot liquids. 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. Burning liquids may be extinguished by dilution with water. Do not use direct water stream. May spread fire. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. 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.

SECTION 6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures: Isolate area. Keep unnecessary and unprotected personnel from entering the area. No smoking in 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.

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: Absorb with materials such as: Clay. Dirt. Sand. 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.

SECTION 7. HANDLING AND STORAGE

7.1 Precautions for safe handling: Keep out of reach of children. Keep away from heat, sparks and flame. Do not swallow. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or mist. Avoid prolonged or repeated contact with skin. Use with adequate ventilation. Wash thoroughly after handling. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. 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. Keep container tightly closed when not in use. Do not store near food, foodstuffs, drugs or potable water supplies.

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

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters
Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
fluroxypyr-meptyl (ISO)	Dow IHG	TWA	10 mg/m3
Triclopyr-2-butoxyethyl ester	Dow IHG	TWA	2 mg/m3
2-Methylpropan-1-ol; iso-butanol	ACGIH	TWA	50 ppm
	GB EH40	TWA	154 mg/m3 50 ppm
	GB EH40	STEL	231 mg/m3 75 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.

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. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

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

Skin protection

Hand protection: Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended.

When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended. 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: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

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.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	
Physical state	Liquid.
Color	Yellow
Odor	Mild
Odor Threshold	No test data available
pH	5.15 1%
Melting point/range	No test data available
Freezing point	No test data available
Boiling point (760 mmHg)	No test data available
Flash point	**closed cup** 85 °C *ASTM D 93*
Evaporation Rate (Butyl Acetate = 1)	No test data available
Flammability (solid, gas)	no data available
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)	No test data available
Water solubility	Emulsion
Partition coefficient: n-octanol/water	no data available

Auto-ignition temperature	No test data available
Decomposition temperature	No test data available
Dynamic Viscosity	20.5 mPa.s at 20 °C *OECD 114*
Kinematic Viscosity	no data available
Explosive properties	No *Thermal*
Oxidizing properties	No

9.2 Other information

Liquid Density	1.02 g/cm3 at 20 °C
Molecular weight	no data available

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

SECTION 10. STABILITY AND REACTIVITY

10.1 Reactivity: no data available

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: Avoid contact with: Acids. Bases. Oxidizers.

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. Hydrogen chloride. Nitrogen oxides. Toxic gases are released during decomposition. Decomposition products can include trace amounts of: Phosgene.

SECTION 11. TOXICOLOGICAL INFORMATION

Toxicological information on this product or its components appear in this section when such data is available.

11.1 Information on toxicological effects
Acute toxicity

Acute oral toxicity
Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Swallowing may result in gastrointestinal irritation.

As product:
LD50, rat, 3,899 mg/kg

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. Excessive exposure may cause irritation to upper respiratory tract (nose and throat).
As product: The LC50 has not been determined.

Skin corrosion/irritation
Brief contact may cause slight skin irritation with local redness.
May cause drying and flaking of the skin.

Serious eye damage/eye irritation
May cause moderate eye irritation.
Corneal injury is unlikely.

Sensitization
Has demonstrated the potential for contact allergy in mice.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)
Product test data not available.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
For the active ingredient(s):
Triclopyr butoxyethyl ester.
In animals, effects have been reported on the following organs:
Kidney.
Liver.
Contains component(s) which have been reported to cause effects on the following organs in animals:
Central nervous system.

Carcinogenicity
For similar active ingredient(s). Triclopyr. Fluroxypyr. Did not cause cancer in laboratory animals.

Teratogenicity
For the active ingredient(s): Has been toxic to the fetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in laboratory animals.

Reproductive toxicity
For similar active ingredient(s). Triclopyr. In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. For the active ingredient(s): Fluroxypyr 1-methylheptyl ester. In animal studies, did not interfere with reproduction.

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

For the minor component(s): In vitro genetic toxicity studies were predominantly negative.

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

COMPONENTS INFLUENCING TOXICOLOGY:

fluroxypyr-meptyl (ISO)

Acute inhalation toxicity
Prolonged exposure is not expected to cause adverse effects. Dust may cause irritation to upper respiratory tract (nose and throat).

Maximum attainable concentration. LC50, rat, male and female, 4 Hour, dust/mist, > 1.16 mg/l No deaths occurred at this concentration.

Triclopyr-2-butoxyethyl ester

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

LC50, rat, 4 Hour, dust/mist, > 4.8 mg/l The LC50 value is greater than the Maximum Attainable Concentration.

Specific Target Organ Systemic Toxicity (Single Exposure)
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Benzenesulfonic acid, dodecyl-, calcium salt

Acute inhalation toxicity
Prolonged excessive exposure to dust may cause adverse effects. Dust may cause irritation to upper respiratory tract (nose and throat).

The LC50 has not been determined. LC50, rat, Dust, > 2 mg/l Estimated.

2-Methylpropan-1-ol; iso-butanol

Acute inhalation toxicity
LC50, rat, male and female, 4 Hour, vapour, > 8000 ppm

LC50, rat, male and female, 6 Hour, vapour, 28.2 mg/l

Specific Target Organ Systemic Toxicity (Single Exposure)
May cause drowsiness or dizziness.
Route of Exposure: Inhalation
Target Organs: Nervous system

May cause respiratory irritation.
Route of Exposure: Inhalation
Target Organs: Respiratory Tract

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicological information on this product or its components appear in this section when such data is available.

12.1 Toxicity

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

LC50, Oncorhynchus mykiss (rainbow trout), flow-through test, 96 Hour, 4.48 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
EC50, Daphnia magna (Water flea), semi-static test, 48 Hour, 32 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants
ErC50, diatom Navicula sp., static test, 72 Hour, Growth rate inhibition, 0.854 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to Above Ground Organisms
oral LD50, Apis mellifera (bees), 48 Hour, > 217.4micrograms/bee

contact LD50, Apis mellifera (bees), 48 Hour, > 200micrograms/bee

Toxicity to soil-dwelling organisms
LC50, Eisenia fetida (earthworms), 14 d, > 2,000 mg/kg

12.2 Persistence and degradability

fluroxypyr-meptyl (ISO)
Biodegradability: Material is not readily biodegradable according to OECD/EEC guidelines.
10-day Window: Fail
Biodegradation: 32 %
Exposure time: 28 d
Method: OECD Test Guideline 301D or Equivalent

Theoretical Oxygen Demand: 2.2 mg/mg
Stability in Water (1/2-life)
, half-life, 454 d

Triclopyr-2-butoxyethyl ester
Biodegradability: Chemical degradation (hydrolysis) is expected in the environment.
Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.
10-day Window: Fail
Biodegradation: 18 %
Exposure time: 28 d
Method: OECD Test Guideline 301B or Equivalent

Theoretical Oxygen Demand: 1.21 mg/mg

Biological oxygen demand (BOD)

Incubation Time	BOD
	0.004 mg/mg

Stability in Water (1/2-life)
Hydrolysis, half-life, 8.7 d, pH 7, Half-life Temperature 25 °C

Benzenesulfonic acid, dodecyl-, calcium salt

Biodegradability: For similar material(s): Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
10-day Window: Pass
Biodegradation: 95 %
Exposure time: 28 d
Method: OECD Test Guideline 301E or Equivalent

2-Methylpropan-1-ol; iso-butanol

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
10-day Window: Pass
Biodegradation: 70 - 80 %
Exposure time: 28 d
Method: OECD Test Guideline 301D or Equivalent
10-day Window: Not applicable
Biodegradation: 90 %
Exposure time: 14 d
Method: OECD Test Guideline 301C or Equivalent

Theoretical Oxygen Demand: 2.59 mg/mg Estimated.

Biological oxygen demand (BOD)

Incubation Time	BOD
10 d	73 - 79 %

12.3 Bioaccumulative potential

Bioaccumulation: No data available for this product.

12.4 Mobility in soil

fluroxypyr-meptyl (ISO)

Expected to be relatively immobile in soil (Koc > 5000).
Partition coefficient(Koc): 6200 - 43000

Triclopyr-2-butoxyethyl ester

Calculation of meaningful sorption data was not possible due to very rapid degradation in the soil.
For the degradation product:

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

Benzenesulfonic acid, dodecyl-, calcium salt
No relevant data found.

2-Methylpropan-1-ol; iso-butanol
Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient(Koc): 2 Estimated.

12.5 Results of PBT and vPvB assessment

fluroxypyr-meptyl (ISO)
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).

Triclopyr-2-butoxyethyl ester
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).

Benzenesulfonic acid, dodecyl-, calcium salt
This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

2-Methylpropan-1-ol; iso-butanol
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).

12.6 Other adverse effects

fluroxypyr-meptyl (ISO)
This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

Triclopyr-2-butoxyethyl ester
This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

Benzenesulfonic acid, dodecyl-, calcium salt
This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

2-Methylpropan-1-ol; iso-butanol
This substance is not in Annex I of Regulation (EC) No 1005/2009 on substances that deplete the ozone layer.

SECTION 13. DISPOSAL CONSIDERATIONS

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.

SECTION 14. TRANSPORT INFORMATION

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

14.1	**UN number**	UN 3082
14.2	**Proper shipping name**	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Triclopyr, Fluroxypyr)
14.3	**Class**	9
14.4	**Packing group**	III
14.5	**Environmental hazards**	Triclopyr, Fluroxypyr
14.6	**Special precautions for user**	Hazard identification No: 90

Classification for SEA transport (IMO-IMDG):

14.1	**UN number**	UN 3082
14.2	**Proper shipping name**	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Triclopyr, Fluroxypyr)
14.3	**Class**	9
14.4	**Packing group**	III
14.5	**Environmental hazards**	Triclopyr, Fluroxypyr
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 3082
14.2	**Proper shipping name**	Environmentally hazardous substance, liquid, n.o.s.(Triclopyr, Fluroxypyr)
14.3	**Class**	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.

SECTION 15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Restrictions on the manufacture, placing on the market and use:
The following substance/s contained in this product is/are subject through Annex XVII of REACH regulation to restrictions on the manufacture, placing on the market and use when present in certain dangerous substances, mixtures and articles. Users of this product have to comply with the restrictions placed upon it by the aforementioned provision.

CAS-No.: 78-83-1	Name: 2-Methylpropan-1-ol; iso-butanol

Restriction status: listed in REACH Annex XVII
Restricted uses: See Annex XVII to Regulation (EC) no 1907/2006 for Conditions of restriction

Other regulations
Registration Number: MAPP 15664

This product contains only components that have been either pre-registered, registered, are exempt from registration or are regarded as registered 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.
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.

SECTION 16. OTHER INFORMATION

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

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Full text of R-phrases referred to under sections 2 and 3

R10	Flammable.
R22	Harmful if swallowed.
R37/38	Irritating to respiratory system and skin.
R38	Irritating to skin.
R41	Risk of serious damage to eyes.
R43	May cause sensitisation by skin contact.
R50	Very toxic to aquatic organisms.
R50/53	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R53	May cause long-term adverse effects in the aquatic environment.
R67	Vapours may cause drowsiness and dizziness.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]
Skin Sens. - 1 - H317 - On basis of test data.
Aquatic Acute - 1 - H400 - On basis of test data.
Aquatic Chronic - 1 - H410 - Calculation method

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

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
Dow IHG	Dow Industrial Hygiene Guideline
GB EH40	UK. EH40 WEL - Workplace Exposure Limits
STEL	Short-term exposure limit (15-minute reference period)
TWA	8-hour, time-weighted average

Information Source and References
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