Dow AgroSciences

SAFETY DATA SHEET

DOW AGROSCIENCES LIMITED

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

Product name: REDEEM™ Herbicide

Revision Date: 27.01.2015
Version: 6.1
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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 identifier
Product name: REDEEM™ 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: 00 31 115 694 982
Local Emergency Contact: 00 31 115 694 982

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008:
Acute toxicity - Category 4 - Oral - H302
Serious eye damage - Category 1 - H318
Chronic aquatic toxicity - Category 2 - H411
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:
Harmful - R22
Irritant - R41
Dangerous for the environment - R51/53
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:

Hazard pictograms

Signal word: DANGER

Hazard statements

H302	Harmful if swallowed.
H318	Causes serious eye damage.
H411	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

P270	Do not eat, drink or smoke when using this product.
P280	Wear eye protection/ face protection.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTRE or doctor/ physician.
P330	Rinse mouth.
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.

Supplemental information

Contains: salts of 2,4-D. May produce an allergic reaction.

Contains salts and esters of MCPA; salts of 2,4-D; 4-chloro-2-methylphenol

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 2039-46-5 **EC-No.** 218-014-2 **Index-No.** 607-052-00-9	–	19.2%	salts and esters of MCPA	Acute Tox. - 4 - H302 Acute Tox. - 4 - H332 Acute Tox. - 4 - H312 Eye Dam. - 1 - H318 Aquatic Acute - 1 - H400 Aquatic Chronic - 1 - H410

CASRN 2008-39-1 **EC-No.** 217-915-8 **Index-No.** 607-040-00-3	–	16.2%	salts of 2,4-D	Acute Tox. - 4 - H302 Eye Dam. - 1 - H318 Skin Sens. - 1 - H317 Aquatic Chronic - 2 - H411
CASRN 57754-85-5 **EC-No.** 260-929-4 **Index-No.** –	–	4.1%	Clopyralid monoethanolamine salt	Not classified
CASRN 1570-64-5 **EC-No.** 216-381-3 **Index-No.** 604-012-00-2	–	< 1.0 %	4-chloro-2-methylphenol	Acute Tox. - 3 - H331 Skin Corr. - 1A - H314 Aquatic Acute - 1 - H400

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 2039-46-5 **EC-No.** 218-014-2 **Index-No.** 607-052-00-9	19.2%	salts and esters of MCPA	Xn - R20/21/22 N - R50 - R53 Xi - R41
CASRN 2008-39-1 **EC-No.** 217-915-8 **Index-No.** 607-040-00-3	16.2%	salts of 2,4-D	Xn - R22 Xi - R41 R43 N - R51 - R53
CASRN 57754-85-5 **EC-No.** 260-929-4 **Index-No.** –	4.1%	Clopyralid monoethanolamine salt	Not classified
CASRN 1570-64-5 **EC-No.** 216-381-3 **Index-No.** 604-012-00-2	< 1.0 %	4-chloro-2-methylphenol	T - R23 C - R35 N - R50

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 centre 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 centre or doctor for treatment advice. Suitable emergency safety shower facility should be available in work area.

Eye contact: Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical consultation, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

Ingestion: Call a poison control centre 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 centre 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: May cause asthma-like (reactive airways) symptoms. Bronchodilators, expectorants, antitussives and corticosteroids may be of help. Chemical eye burns may require extended irrigation. Obtain prompt consultation, preferably from an ophthalmologist. If burn is present, treat as any thermal burn, after decontamination. 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 centre or doctor, or going for treatment.

SECTION 5. FIREFIGHTING MEASURES

5.1 Extinguishing media
Suitable extinguishing media: To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical or 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: Hydrogen chloride. 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. Dense smoke is produced when product burns.

5.3 Advice for firefighters
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. 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.

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: Evacuate area. Refer to section 7, Handling, for additional precautionary measures. Only trained and properly protected personnel must be involved in clean-up operations. Keep upwind of spill. Ventilate area of leak or spill. 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.

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. Do not get in eyes. Do not swallow. Avoid breathing vapour or mist. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. 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.

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 engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. 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. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl chloride ("PVC" or "vinyl"). 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. In misty atmospheres, use an approved particulate respirator. Use the following CE approved air-purifying respirator: Organic vapour 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.
Colour	Brown
Odour	Mild Phenolic
Odour Threshold	No test data available
pH	6.56 1% *CIPAC MT 75* 1% aqueous solution.
Melting point/range	Not applicable
Freezing point	No test data available
Boiling point (760 mmHg)	No test data available
Flash point	**closed cup** *92/69/EEC A9* 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
Vapour Pressure	Not applicable
Relative Vapour Density (air = 1)	Not applicable
Relative Density (water = 1)	1.117 at 24 °C / 4 °C *EC Method A3*
Water solubility	Soluble

Partition coefficient: n-octanol/water	no data available
Auto-ignition temperature	none below 400 degC
Decomposition temperature	No test data available
Dynamic Viscosity	6.68 mPa.s at 20 °C
Kinematic Viscosity	5.98 mm2/s at 20 °C
Explosive properties	No *EEC A14*
Oxidizing properties	No

9.2 Other information

Liquid Density	1.117 g/cm3 at 24 °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 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: Active ingredient decomposes at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.

10.5 Incompatible materials: Avoid contact with: Strong acids. Strong bases. Strong 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: Hydrogen chloride. Phosgene. Toxic gases are released during decomposition.

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.

As product:
LD50, Rat, male, 1,964 mg/kg

Acute dermal toxicity

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

As product:
LD50, Rabbit, > 2,000 mg/kg No deaths occurred at this concentration.

Acute inhalation toxicity
Mist may cause irritation of upper respiratory tract (nose and throat) and lungs. Prolonged excessive exposure to mist may cause adverse effects.
As product: The LC50 has not been determined.

Skin corrosion/irritation
Prolonged contact is essentially nonirritating to skin.
Repeated exposure may cause irritation, even a burn.

Serious eye damage/eye irritation
May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur.

Sensitization

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)
Product test data not available.

Specific Target Organ Systemic Toxicity (Repeated Exposure)
For the active ingredient(s):
In animals, effects have been reported on the following organs:
Kidney.
Liver.
Blood.
Bone marrow.
Testes.
Adrenal gland.
Eye.
Spleen.
Thyroid.

Carcinogenicity
For similar active ingredient(s). 2-methyl-4-chlorophenoxyacetic acid (MCPA). Clopyralid. Did not cause cancer in laboratory animals. Various animal cancer tests have shown no reliably positive association between 2,4-D exposure and cancer. Epidemiology studies on herbicide use have been both positive and negative with the majority being negative.

Teratogenicity
For similar active ingredient(s). 2-methyl-4-chlorophenoxyacetic acid (MCPA). Has caused birth defects in laboratory animals only at doses toxic to the mother. Has been toxic to the fetus in laboratory animals at doses toxic to the mother.

For similar active ingredient(s). Clopyralid caused birth defects in test animals, but only at greatly exaggerated doses that were severely toxic to the mothers. No birth defects were observed in animals given clopyralid at doses several times greater than those expected during normal exposure.

For similar active ingredient(s). 2,4-Dichlorophenoxyacetic acid. 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). 2,4-Dichlorophenoxyacetic acid. In laboratory animals, excessive doses toxic to the parent animals caused decreased weight and survival of offspring. 2-methyl-4-chlorophenoxyacetic acid (MCPA). Clopyralid. In animal studies, did not interfere with reproduction.

Mutagenicity
For the active ingredient(s): In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were inconclusive

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

COMPONENTS INFLUENCING TOXICOLOGY:

salts and esters of MCPA

Acute inhalation toxicity
No adverse effects are anticipated from single exposure to vapour. Mist may cause irritation of upper respiratory tract (nose and throat) and lungs.

Maximum attainable concentration. LC50, Rat, male and female, 4 Hour, Aerosol, > 4.72 mg/l

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

salts of 2,4-D

Acute inhalation toxicity
No adverse effects are anticipated from single exposure to vapour.

The LC50 has not been determined. For similar material(s): LC50, Rat, 4 Hour, dust/mist, > 1.79 mg/l

Clopyralid monoethanolamine salt

Acute inhalation toxicity
No adverse effects are anticipated from single exposure to mist. Mist may cause irritation of upper respiratory tract (nose and throat).

As product: LC50, Rat, 4 Hour, Mist, > 2.6 mg/l

Maximum attainable concentration.

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

4-chloro-2-methylphenol

Acute inhalation toxicity
LC50, Rat, male and female, 4 Hour, dust/mist, 0.9 mg/l

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 toxic to aquatic organisms (LC50/EC50/IC50 between 1 and 10 mg/L in the most sensitive species).

LC50, Oncorhynchus mykiss (rainbow trout), semi-static test, 96 Hour, > 100 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates

EC50, Daphnia magna (Water flea), 48 Hour, > 70 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants
EbC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Biomass, > 100 mg/l, OECD Test Guideline 201 or Equivalent

EC50, Lemna minor (duckweed), 14 d, 1.98 mg/l, OECD 221.

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), 1440mg/kg bodyweight.

oral LD50, Apis mellifera (bees), 48 Hour, > 216micrograms/bee

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

Toxicity to soil-dwelling organisms
LC50, Eisenia fetida (earthworms), 14 d, survival, > 1,000 mg/kg

12.2 Persistence and degradability

salts and esters of MCPA

Biodegradability: For similar active ingredient(s). Biodegradation under aerobic laboratory conditions is below detectable limits (BOD20 or BOD28/ThOD < 2.5%). Biodegradation rate may increase in soil and/or water with acclimation.

Stability in Water (1/2-life)
Hydrolysis, half-life, 30.0 Hour

salts of 2,4-D

Biodegradability: For similar active ingredient(s). 2,4-Dichlorophenoxyacetic acid. Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

Clopyralid monoethanolamine salt

Biodegradability: For similar active ingredient(s). Clopyralid. Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

4-chloro-2-methylphenol

Biodegradability: No relevant information found.
Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.

Biodegradation: 2 %
Exposure time: 28 d
Method: OECD Test Guideline 301B or Equivalent

Photodegradation
Atmospheric half-life: 32 Hour

12.3 Bioaccumulative potential

salts and esters of MCPA

Bioaccumulation: For similar active ingredient(s). Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

salts of 2,4-D

Bioaccumulation: For similar active ingredient(s). 2,4-Dichlorophenoxyacetic acid. Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Clopyralid monoethanolamine salt

Bioaccumulation: For similar active ingredient(s). Clopyralid. Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

4-chloro-2-methylphenol

Bioaccumulation: Bioconcentration potential is moderate (BCF between 100 and 3000 or Log Pow between 3 and 5).
Partition coefficient: n-octanol/water(log Pow): 3.09

12.4 Mobility in soil

salts and esters of MCPA

For similar active ingredient(s).
Potential for mobility in soil is very high (Koc between 0 and 50).

salts of 2,4-D

For similar active ingredient(s).
2,4-Dichlorophenoxyacetic acid.
Potential for mobility in soil is very high (Koc between 0 and 50).

Clopyralid monoethanolamine salt

For similar active ingredient(s).
Clopyralid.
Potential for mobility in soil is very high (Koc between 0 and 50).

4-chloro-2-methylphenol

Potential for mobility in soil is high (Koc between 50 and 150).
Partition coefficient(Koc): 124 - 645

12.5 Results of PBT and vPvB assessment

salts and esters of MCPA

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).

salts of 2,4-D

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).

Clopyralid monoethanolamine salt

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).

4-chloro-2-methylphenol

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

12.6 Other adverse effects

salts and esters of MCPA

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

salts of 2,4-D

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

Clopyralid monoethanolamine salt

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

4-chloro-2-methylphenol

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.(2,4-D)
14.3	**Class**	9
14.4	**Packing group**	III
14.5	**Environmental hazards**	2,4-D
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.(2,4-D)
14.3	**Class**	9
14.4	**Packing group**	III
14.5	**Environmental hazards**	2,4-D
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.(2,4-D)
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

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.

Other regulations
Registration Number: MAPP 17096

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.

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

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

R20/21/22	Harmful by inhalation, in contact with skin and if swallowed.
R22	Harmful if swallowed.
R23	Toxic by inhalation.

R35	Causes severe burns.
R41	Risk of serious damage to eyes.
R43	May cause sensitisation by skin contact.
R50	Very toxic to aquatic organisms.
R51	Toxic to aquatic organisms.
R51/53	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.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) No 1272/2008
Acute Tox. - 4 - H302 - On basis of test data.
Eye Dam. - 1 - H318 - On basis of test data.
Aquatic Chronic - 2 - H411 - Calculation method

Revision
Identification Number: 101191843 / A293 / Issue Date: 27.01.2015 / Version: 6.1
DAS Code: EF-685
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

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.

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