

SAFETY DATA SHEET ACCORDING TO 1907/2006/EC, 453/2010/EU, 2015/830/EU (REACH)

ACTICELL NUTTY PECAN

Revised on / Version: 19/07/2019 / 0002
Replaces revision of / Version: 19/05/2017 / 0001

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

- 1.1 Product Identifier**
Product Name : ACTICELL NUTTY PECAN
Product description : Fertiliser
Product Type : Soluble Liquid
- 1.2 Relevant identified uses of the substance or mixture and uses advised against**
Relevant uses: Fertiliser
Uses advised against: All uses not specified in this section or in section 7.3
- 1.3 Details of the supplier of the safety data sheet**
Rolfes Agri (Pty) Ltd
288 Mundt Street
Waltloo
Pretoria
South Africa
Tel: +27(0)12 803 0145
Fax: +27(0)12 803 8418
- 1.4 Emergency telephone number**
National advisory body/Poison Centre
Telephone number : SOUTH AFRICA
Griffon Poison Information Centre
(24 Hour Poisoning Emergency Helpline)
+27(0)82 446 8946



SECTION 2: Hazards identification**2.1 Classification of the substance or mixture:
CLP Regulation (EC) no 1272/2008:**

Ox. Sol. 2: Oxidizing solid, Category 2 - H272
 Acute Tox. 4: Acute Toxicity (oral), Category 4 - H302
 Skin Irrit. 2: Skin Irritation, Category 2 - H315
 Eye Dam. 1: Eye Damage, Category 1 - H318
 Aquatic Acute 1: Aquatic Acute, Category 1 - H400
 Aquatic Chronic 1: Aquatic Chronic, Category 1 - H410

**2.2 Label elements
CLP Regulation (EC) no 1272/2008:****Hazard pictogram(s):****Signal word**

: Danger

Hazard statement(s)

: H272 - May intensify fire, oxidizer
 H302 - Harmful if swallowed
 H315 - Causes skin irritation
 H318 - Causes serious eye damage
 H400 - Very toxic to aquatic life
 H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statement(s) :

P101 - If medical advice is needed, have product container or label at hand.
 P102 - Keep out of reach of children.
 P103 - Read label before use.
 P210 - Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
 P220 - Keep/Store away from clothing/combustible materials.
 P221 - Take any precaution to avoid mixing with combustibles.
 P264 - Wash hands thoroughly after handling.
 P270 - Do not eat, drink or smoke when using this product.
 P273 - Avoid release to the environment.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician.
 P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do, continue rinsing.
 P321 - Specific treatment (see Section 4 on this label).
 P332+P313 - If skin irritation occurs: Get medical advice/attention.
 P330 - Immediately call a POISON CENTER or doctor/physician.
 P362 - Take off contaminated clothing and wash before reuse.
 P370+P378 - In case of fire: Use dry chemical, Carbon Dioxide, foam or water mist or fog for extinction.
 P391 - Collect spillage.
 P501 - Dispose of the contents/containers in accordance with the current legislation on waste treatment.

**2.3 Other hazards
Non-applicable****SECTION 3: Composition/information on ingredients****3.1 Substance:
Non-applicable**

3.2 Mixture:
Chemical description: Multi-Constituent Substance
Components:

Chemical Name:	Nitric Acid
CAS:	7697-37-2
EC:	231-714-2
Index:	-
REACH:	01-2119487297-23-0027
Concentration:	< 25%

Chemical Name:	Nickel (II) sulfate hexahydrate
CAS:	10101-97-0
EC:	232-104-9
Index:	-
REACH:	-
Concentration:	< 10%

Chemical Name:	Zinc oxide
CAS:	1314-13-2
EC:	215-222-5
Index:	-
REACH:	-
Concentration:	< 10%

SECTION 4: First Aid Measures

4.1 Description of first aid measures

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the SDS of this product.

By inhalation:

Remove to fresh air. If not breathing gives artificial respiration. If breathing is difficult, give oxygen. Do not give mouth-to-mouth resuscitation if victim ingested or inhaled the substance. Keep person at rest and warm. Treat symptomatically and supportively as and when required. Obtain medical advice if necessary

By skin contact:

In case of contact it is recommended to clean the affected area thoroughly with water and neutral soap. In case of modifications on the skin (stinging, redness, rashes, blisters) seek medical advice with this Safety data Sheet.

By eye contact:

This product contains substances classified as hazardous for eye contact. Rinse eyes thoroughly for at least 15 minutes with lukewarm water, ensuring that the person affected does not rub or close their eyes.

By ingestion / aspiration:

Have victim rinse mouth thoroughly with water. Give water to dilute the material if victim is alert and not convulsing. Do not induce vomiting without medical advice. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomits, rinse mouth and administer more water. Never give anything by mouth to an unconscious person. Qualified medical personnel should perform administration of oxygen. Seek medical advice if necessary.

4.2 Most important symptoms and effects, both acute and delayed

Irritation, allergic reactions, asthmatic complaints, breathing difficulties, gastrointestinal complaints.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician:	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Specific treatments:	Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Fire Extinguishing Media

Suitable extinguishing media:

Use dry chemical, Carbon Dioxide, foam or water mist or fog. If stored with other combustible products use water, CO₂ or dry chemical.

Unsuitable extinguishing media:

None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture:

Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products:

During fire, irritating and toxic gases will be released due to thermal decomposition or combustion.

5.3 Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Destroy any source of ignition. In case of fire, refrigerate the storage containers and tanks for products susceptible to inflammation, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Isolate leaks provided that there is no additional risk for the people performing the task. Personal protection equipment must be used against potential contact with the spilt product (see section 8). Evacuate the area and keep out those who do not have protection.

6.2 Environmental precautions:

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways or soil). Collect spillage

6.3 Methods and materials for containment and cleaning up

Absorb the spillage using sand, saw dust or inert absorbent and move it to a safe place. For any concern related to disposal consult section 13.

6.4 Reference to other sections:

See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling:

A.- Precautions for safe manipulation

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

B.- Technical recommendations for the prevention of fires and explosions

Due to its non-flammable nature, the product does not present a fire risk under normal conditions of storage, manipulation and use.

C.- Technical recommendations to prevent ergonomic and toxicological risks

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

7.2 Conditions for safe storage, including any incompatibilities:

A.- Technical measures for storage

Minimum Temp.: 5 °C

Maximum Temp.: 30 °C

Maximum time: 36 Months

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s)

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Substances whose occupational exposure limits have to be monitored in the work environment.

Exposure limit values

Nitric Acid:

Short-term exposure limit (15-minute): 2.6 - 5 mg/m³

Zinc Oxide:

Long-term exposure limit (8-hour TWA): WEL 5 mg/m³

Short-term exposure limit (15-minute): WEL 10 mg/m³

Workers exposure

Nitric Acid:

DNEL - 2.6 mg/m³ (worker)

1.3 mg/m³ (general population)

Nickel (II) sulfate hexahydrate:

DNEL - 0.7 mg/m³ (acute - local effects)
16 mg/m³ (acute - systemic effects)
0.05 mg/m³ (chronic - local effects)
0.05 mg/m³ (chronic - systemic effects)

Zinc Oxide:

Workers - Inhalation; Long term systemic effects: 5 mg/m³
Workers - Inhalation; Long term local effects: 0.5 mg/m³
Workers - Dermal; Long term systemic effects: 83 mg/kg/day
General population - Inhalation; Long term systemic effects: 2.5 mg/m³
General population - Dermal; Long term systemic effects: 83 mg/kg/day
General population - Oral; Long term systemic effects: 0.83 mg/kg/day

Public exposure

Zinc Oxide:

PNEC - Fresh water; 0.0206 mg/l
- Marine water; 0.0061 mg/l
- STP; 100 µg/l
- Sediment (Freshwater); 235.6* mg/kg sediment dw
- Sediment (Marinewater); 113* mg/kg sediment dw
- Soil; 106.8** mg/kg

The units are expressed in 'mg/µg' of: Zinc.

These PNECs are added value PNECs- they are to be added to the natural background levels of: Zinc.

- in the appropriate compartments (e.g. soils, sediments).

(*) A generic bioavailability factor of 0.5 is applied by default, according to the EU risk assessment (ECB 2008).

(**) by default this value was multiplied by '3' to take into account "lab-to-field" differences in toxicity.

(STP) The PNEC for STP was derived by applying an assessment factor to the lowest relevant toxicity value (5.2mg Zn/L). (Dutka et al., 1983)

8.2 Exposure controls

Information concerning exposure control is provided in the Exposure scenarios elaborated by calcium carbonate.

Appropriate engineering controls:

No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Individual protection measures

Hygiene measures:

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

Eye/face protection:

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Possible: safety glasses with side-shields

Skin protection

Hand protection:

Protective gloves against minor risks.

Body protection:

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection:

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection:

Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary.

Environmental exposure controls:

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	: Soluble Liquid
Colour	: Brown
Odour	: Pungent odour.
Odour threshold	: Not available.
pH	: 0.59

Boiling point at atmospheric pressure	: > 100°C
Vapour pressure at 20 °C	: Non-applicable *
Vapour pressure at 50 °C	: Non-applicable *
Evaporation rate at 20 °C	: Non-applicable *

Product description:

Density at 20 °C	: 1.39 g/ml
Relative density at 20 °C	: Non-applicable *
Dynamic viscosity at 20 °C	: Non-applicable *
Kinematic viscosity at 20 °C	: Non-applicable *
Kinematic viscosity at 40 °C	: Non-applicable *
Vapour density at 20 °C	: Non-applicable *
Partition coefficient n-octanol/water 20 °C	: Non-applicable *
Solubility in water at 20 °C	: Soluble in water.
Solubility properties	: Non-applicable *
Decomposition temperature	: Non-applicable *
Melting point/freezing point	: Non-applicable *
Explosive properties	: Non-explosive in the presence of the following materials or conditions: open flames, sparks and static discharge, heat, shocks and mechanical impacts, oxidizing materials, reducing materials, combustible materials, organic materials, metals, acids, alkalis and moisture.
Oxidising properties	: Non-applicable *

Flammability:

Flash Point	: Non Flammable (>60 °C)
Auto ignition temperature	: Non-applicable *
Lower flammability limit	: Non-applicable *
Upper flammability limit	: Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

10.2 Chemical stability:

Chemically stable under the conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Avoid excessive heat.	Not applicable	Not applicable

10.5 Incompatible materials:

Acids	Water	Combustive materials	Combustible materials	Others
Not applicable	Not applicable	Not applicable	Avoid	Alkalis, organic material, metals, reducing agents.

10.6 Hazardous decomposition products:

Hydrogen gas, Nitrogen oxides, Carbon oxides, Zinc oxides.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Zinc oxide		
LD50 Oral	> 5000 mg/kg	Rat
LC50 (inhalation)	> 5.7 mg/l	Rat
Nitric Acid		
LC50 (inhalation)	> 2.65 mg/L	Rat
Nickel (II) sulfate hexahydrate		
LD50 (oral)	361 mg/kg	Rat

11.2 Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than recommended by the occupational exposure limits, it may result in adverse effects on health depending on the means of exposure:

A. Ingestion (acute effect):

- Acute toxicity: Based on available data, the classification criteria are met. Refer to Section 2.

- Corrosively/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect.

B. Inhalation (acute effect):

- Acute toxicity: Based on available data, the classification criteria are met. Refer to Section 2.
- Corrosively/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect.

C. Contact with the skin and the eyes (acute effect):

- Contact with the skin: Based on available data, the classification criteria are met. Refer to Section 2.
- Contact with the eyes: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect.

D. CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for the effects mentioned.
- Mutagenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect.

E. Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect.
- Cutaneous: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect.

F. Specific target organ toxicity (STOT)-time exposure:

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect.

G. Specific target organ toxicity (STOT)-repeated exposure:

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect.
- Skin: Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect.

H. Aspiration hazard:

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect.

Other information:

Non-applicable

Specific toxicology information on the substance:

No data available

SECTION 12: Ecological information

The experimental information related to the eco-toxicological properties of the product itself is not available.

12.1 Toxicity:

Very toxic to aquatic life with long lasting effects. Do not discharge into drains or watercourses or onto the ground.

Zinc Oxide:

The Acute aquatic toxicity database on zinc contains data on 11 standard species obtained under standard testing conditions at different pH and hardness. The full analysis of these data is given in the CSR. The reference values for acute aquatic toxicity, based on the lowest observed EC50 values of the corresponding databases at different pH and expressed as Zn⁺⁺ ion concentration are:

- for pH <7: 0.413 mg Zn⁺⁺/l (48 hr - Ceriodaphnia dubia test according to US EPA 821-R-02-012 standard test protocol; reference: Hyne et al 2005)
- for pH >7-8.5: 0.136 mg Zn⁺⁺/l (72 hr - Selenastrum capricornutum (=Pseudokirchneriella subcapitata) test according to OECD 201 standard protocol; reference: Van Ginneken, 1994) After applying the molecular weight correction (transformation/dissolution testing is not relevant since this zinc compound is readily soluble), the specific reference values for acute aquatic toxicity of the different zinc sulphates are:

For zinc monohydrate (a ZnSO₄.H₂O/Zn molecular weight ratio of 2.74):

- for pH <7: 1.13 mg Zn/l (based on 48 hr Ceriodaphnia dubia test cfr above)
- for pH >7-8.5: 3.73 mg Zn/l (based on 72 hr Selenastrum capricornutum test cfr above)

For zinc hexahydrate (a ZnSO₄.6H₂O/Zn molecular weight ratio of 4.12):

- for pH <7: 1.70 mg Zn/l (based on 48 hr Ceriodaphnia dubia test cfr above)
- for pH >7-8.5: 0.56 mg Zn/l (based on 72 hr Selenastrum capricornutum test cfr above)

For zinc heptahydrate (a ZnSO₄.7H₂O/Zn molecular weight ratio of 4.4):

- for pH <7: 1.82 mg Zn/l (based on 48 hr Ceriodaphnia dubia test cfr above)
- for pH >7-8.5: 0.60 mg Zn/l (based on 72 hr Selenastrum capricornutum test cfr above)

M-factor: 1

The M-Factor for zinc oxide is 1, referring to a) the acute aquatic ecotoxicity values of 136 µg Zn/l and 413 µg Zn/l for the zinc ion at pH 8 and 6 respectively, b) the molecular weight ratio of ZnO versus Zn⁺⁺, and c) the results of the T/D testing, showing that ZnO has lower solubility than the soluble zinc compounds.

12.2 Persistence and degradability:

The product contains mainly inorganic substances which are not biodegradable.

12.3 Bio accumulative potential:

Does not bio-accumulated.

12.4 Mobility in soil:

For zinc (like for other metals) the transport and distribution over the different environmental compartments e.g. the water (dissolved fraction, fraction bound to suspended matter), soil (fraction bound or complexed to the soil particles, fraction in the soil pore water) is described and quantified by the metal partition coefficients between these different fractions. In the CSR, a solids-water partitioning coefficient of 158.5 l/kg (log value 2.2) was applied for zinc in soils (CSR zinc 2010).

Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

12.5 Results of PBT and vPvB assessment:

Not available

12.6 Other adverse effects:

According to the criteria of the European classification and labelling system, the substance does not require classification as hazardous for the environment.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal:

The generation of waste should be avoided or minimised wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable

effluent treatment plant. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Hazardous waste:

Non-hazardous waste.

Packaging









Methods of disposal:

The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions:

This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	Land transport (ADR/RID)	Inland waterway transport (AND/ADNR)	Sea Transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1 UN Number	3082.	3082.	3082	3082
14.2 UN proper shipping name	Environmentally hazardous substance, liquid, N.O.S (contains Zinc oxide and Nickel (II) sulfate hexahydrate)	Environmentally hazardous substance, liquid, N.O.S (contains Zinc oxide and Nickel (II) sulfate hexahydrate)	Environmentally hazardous substance, liquid, N.O.S (contains Zinc oxide and Nickel (II) sulfate hexahydrate)	Environmentally hazardous substance, liquid, N.O.S (contains Zinc oxide and Nickel (II) sulfate hexahydrate)
14.3 Transport hazard class(es)	9 	9 	9 	9 
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	Yes 	Yes 	Yes 	Yes 
14.6 Special precautions for user	No data available	No data available	No data available	No data available
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:	No data available	No data available	No data available	No data available

SECTION 15: Regulatory information

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

Candidate substances for authorisation under the Regulation (EC) 1907/2006 (REACH): Non-applicable

Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable

Regulation (EC) 1005/2009, about substances that deplete the ozone layer: Non-applicable

Article 95, REGULATION (EU) No 528/2012: Non-applicable

Regulation (EU) No 649/2012, in relation to the import and export of hazardous chemical products:

Non-applicable

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc.): Non-applicable

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of the local circumstances in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

Other legislation:

The product could be affected by sectorial legislation

Regulation (EC) No 2003/2003 of the European Parliament and of the Council of 13 October 2003 relating to fertilisers

15.2 Chemical Safety Assessment: Not available.

SECTION 16: Other information

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) N° 1907/2006 (Regulation (EU) N° 453/2010, Regulation (EC) N° 2015/830)

Texts of the legislative phrases mentioned in section 2:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3.

Texts of the legislative phrases mentioned in section 3:

Not applicable.

CLP Regulation (EC) n° 1272/2008 (refer to section 3):

Ox. Sol. 2: Oxidizing solid, Category 2 - H272

Acute Tox. 4: Acute Toxicity (oral), Category 4 - H302

Skin Irrit. 2: Skin Irritation, Category 2 - H315

Eye Dam. 1: Eye Damage, Category 1 - H318

Aquatic Acute 1: Aquatic Acute, Category 1 - H400

Aquatic Chronic 1: Aquatic Chronic, Category 1 - H410

Advice related to training:

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

<http://echa.europa.eu>

www.dguv.de/ifa/gestis-dnel

<http://eur-lex.europa.eu>

Relevant P-, H- and EUH-phrases (number and full text)

P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P103 - Read label before use.
P210 - Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P220 - Keep/Store away from clothing/combustible materials.
P221 - Take any precaution to avoid mixing with combustibles.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do, continue rinsing.
P321 - Specific treatment (see Section 4 on this label).
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P330 - Immediately call a POISON CENTER or doctor/physician.
P362 - Take off contaminated clothing and wash before reuse.
P370+P378 - In case of fire: Use dry chemical, Carbon Dioxide, foam or water mist or fog for extinction.
P391 - Collect spillage.
P501 - Dispose of the contents/containers in accordance with the current legislation on waste treatment.

Abbreviations and acronyms:

ADR - European agreement concerning the international carriage of dangerous goods by road
IMDG - International maritime dangerous goods code
IATA - International Air Transport Association
ICAO - International Civil Aviation Organisation
COD - Chemical Oxygen Demand
BOD5 - 5-day biochemical oxygen demand
BCF - Bio concentration factor
Log-POW - Octanol–water partition coefficient
KOC - Partition coefficient of organic carbon

Date of revision : 19/07/2019

Version : 2

Notice to reader**DISCLAIMER AND LIMITATION OF LIABILITY**

The information and recommendations contained in this Safety Data Sheet ("SDS") relate only to the specific material referred to herein (the "Material") and do not relate to the use of such Material in combination with any other material or process. The information and recommendations contained herein are believed to be current and correct as of the date of this SDS. HOWEVER, THE INFORMATION AND RECOMMENDATIONS ARE PRESENTED WITHOUT WARRANTY, REPRESENTATION OR LICENSE OF ANY KIND, EXPRESS OR IMPLIED, WITH RESPECT TO THEIR ACCURACY, CORRECTNESS OR COMPLETENESS, AND THE SELLER, SUPPLIER AND MANUFACTURER OF THE MATERIAL AND THEIR RESPECTIVE AFFILIATES (COLLECTIVELY, THE "SUPPLIER") DISCLAIM ALL LIABILITY FOR RELIANCE ON SUCH INFORMATION AND RECOMMENDATIONS.

This SDS is not a guarantee of safety. A buyer or user of the Material (a "Recipient") is responsible for ensuring that it has all current information necessary to safely use the Material for its specific purpose.