



SAFETY DATA SHEET

12-HYDROXYSTEARIC ACID

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

1.1 Product identifier

Product name : 12-HYDROXYSTEARIC ACID

EC number : 203-366-1

REACH Registration number

Registration number	Legal entity
01-2119542189-34-0001	-

CAS number : 106-14-9

Product code : Not available.

Product type : Solid.

Other means of identification : Octadecanoic acid, 12-hydroxy-; 12-Hydroxyoctadecanoic acid; HYDROXYSTEARIC ACID; Stearic acid, 12-hydroxy-; 12-hydroxyoctadecanoic acid (CAS RN 106-14-9) for use in the manufacture of polyglycerin-poly-12-hydroxyoctadecanoic acid esters; DL-12-hydroxystearic acid; Hydroxy aliphatic monocarboxylic acid (C6-24)

Chemical formula : C18-H36-O3

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

Product use : Lubricants, greases, release products. Fuel additives. Paints and Varnishes. Ink. Manufacture of soaps and detergents. Solvent for waxes. Cosmetics. Polyurethane. Manufacture of pharmaceutical products. Intermediate compound.

Area of application : Consumer applications, Industrial applications, Professional applications.

Uses advised against
None identified.

1.3 Details of the supplier of the safety data sheet

Cofco International Netherlands B.V.
Weena 505, 3013 AL Rotterdam, The Netherlands
+31 (0)10 7007200

e-mail address of person responsible for this SDS : castorproducts@cofcointernational.com

1.4 Emergency telephone number

Supplier

Telephone number : +31 10 700 7200
Mon- Fri 9 am - 6 pm
Central European Time (CET)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mono-constituent substance

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Aquatic Acute 1, H400

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms



Signal word : **Warning**

Hazard statements : **H400** - Very toxic to aquatic life.

Precautionary statements

General

P103 - Read carefully and follow all instructions.
P102 - Keep out of reach of children.
P101 - If medical advice is needed, have product container or label at hand.

Prevention

P273 - Avoid release to the environment.

Response

P391 - Collect spillage.

Storage

Not applicable.

Disposal

P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients : 12-hydroxystearic acid

Supplemental label elements : Not applicable.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Not applicable.

Tactile warning of danger : Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII

PBT	P	B	T	vPvB	vP	vB
No	No	No	No	No	No	No

12-HYDROXYSTEARIC ACID

SECTION 2: Hazards identification

Other hazards which do not result in classification : May form combustible dust concentrations in air.

SECTION 3: Composition/information on ingredients

3.1 Substances : Mono-constituent substance

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
12-hydroxystearic acid	REACH #: 01-2119542189-34 EC: 203-366-1 CAS: 106-14-9	100	Aquatic Acute 1, H400 See Section 16 for the full text of the H statements declared above.	M [Acute] = 1	[1]

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Type

[1] Constituent

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- Skin contact** : Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : In case of fire, use water spray (fog), foam, dry chemical or CO₂.
LARGE FIRE: Use regular foam or flood with fine water spray.

Unsuitable extinguishing media : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Fine dust clouds may form explosive mixtures with air. The Minimum Ignition Energy (MIE): Not available.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

5.3 Advice for firefighters

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

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, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and material for containment and cleaning up

Small spill : Move containers from spill area. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.

Large spill : Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.

SECTION 6: Accidental release measures

- 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

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Packaging materials:

Recommended: Metals

Not recommended: plastic packaging

Seveso Directive - Reporting thresholds (in tonnes)

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
1	100 tonne	200 tonne

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

No exposure limit value known.

Biological exposure indices

None known.

SECTION 8: Exposure controls/personal protection

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
12-hydroxystearic acid	DNEL	Long term Dermal	250 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	125 mg/kg bw/day	General population [Consumers]	Systemic

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
12-hydroxystearic acid	Fresh water	0.4 µg/l	-
	Fresh water - Intermittent release.	44.7 µg/l	-
	Marine water	0.04 µg/l	-
	Sewage Treatment Plant	45.3 mg/l	-
	Sediment	0.95 mg/kg	-
	Soil	0.19 mg/kg	-

8.2 Exposure controls

Appropriate engineering controls : 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. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

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. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. Recommended: Wear safety glasses with side protection in accordance with EN 166.

Skin protection

SECTION 8: Exposure controls/personal protection

- Hand protection** :  Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
 Wear suitable gloves tested to EN374.
- 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** :  Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: Wear dust protection mask P2.
- Environmental exposure controls** :  Avoid release to the environment.
Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Solid. [Flakes.]
- Colour** : White.
- Odour** : Odourless.
- Odour threshold** : Not available.
- Melting point/freezing point** : 80 to 81°C [OECD 102] (176 to 177.8°F)
- Initial boiling point and boiling range** : 265°C [OECD 103] (509°F)
- Flammability** : Non-flammable.
- Lower and upper explosion limit** : Not applicable.
- Flash point** : Closed cup: 205°C (401°F)
- Auto-ignition temperature** : Not applicable.
- Decomposition temperature** : Not available.
- pH** : Not applicable.
- Viscosity** : Not applicable.
- Solubility(ies)** :

Media	Result
water	Very slightly soluble

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SECTION 9: Physical and chemical properties

Solubility in water	: 0.976 mg/l at 20°C [OECD 105] Soluble in chloroform and ethanol (by heating).
Miscible with water	: No.
Partition coefficient: n-octanol/ water	: 5.7 [OECD 117]
Vapour pressure	: <0.000000026 kPa (<0.000000193 mm Hg) [OECD 104]
Evaporation rate	: <1 (butyl acetate = 1)
Relative density	: 0.875 to 0.895 [OECD 109] g/cm ³ (100°C / 212°F)
Density	: 1.01 g/cm ³ [OECD 109] g/cm ³ [OECD 109]
Vapour density	: Not applicable.
Explosive properties	: Not considered to be a product presenting a risk of explosion.
Oxidising properties	: No oxidising ingredients present.
Particle characteristics	
Median particle size	: Not available.

9.2 Other information

Molecular weight	: 300.54 g/mole
Physical/chemical properties comments	: No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: The product is stable.
10.3 Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerisation will not occur.
10.4 Conditions to avoid	: Keep away from heat, sparks and flame.
10.5 Incompatible materials	: Strong oxidising materials
10.6 Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
12-hydroxystearic acid	LD50 Dermal	Rabbit	>5000 mg/kg (similar material)	-
	LD50 Oral	Rat	>2000 mg/kg	-

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SECTION 11: Toxicological information

Conclusion/Summary : Based on available data, the classification criteria are not met.

Acute toxicity estimates

N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
12-hydroxystearic acid	Eyes - Cornea opacity	Rabbit	0	24 hours	-
	Eyes - Cornea opacity	Rabbit	0	48 hours	-
	Eyes - Cornea opacity	Rabbit	0	72 hours	-
	Eyes - Oedema of the conjunctivae	Rabbit	0	24 hours	-
	Eyes - Oedema of the conjunctivae	Rabbit	0	48 hours	-
	Eyes - Oedema of the conjunctivae	Rabbit	0	72 hours	-
	Eyes - Iris lesion	Rabbit	0	72 hours	-
	Eyes - Iris lesion	Rabbit	0	48 hours	-
	Eyes - Iris lesion	Rabbit	0	24 hours	-
	Skin - Erythema/Eschar	Rabbit	0	24 hours	-
	Skin - Erythema/Eschar	Rabbit	0	48 hours	-
	Skin - Erythema/Eschar	Rabbit	0	72 hours	-
	Skin - Erythema/Eschar	Rabbit	1	24 hours	-
	Skin - Erythema/Eschar	Rabbit	0	1 hours	-

Conclusion/Summary

Skin : Slightly irritating to the skin. / Non-irritant to skin. (Method: OECD 439)

Eyes : Slightly irritating to the eyes. / Non-irritating to the eyes. (Method: OECD 437)

Respiratory : Non-irritating to the respiratory system. (similar material)

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
12-hydroxystearic acid	skin	Guinea pig	Not sensitizing

Conclusion/Summary

Skin : Non-sensitiser to skin. (Method: OECD 406)

Respiratory : Non-sensitiser to lungs. (similar material)

Mutagenicity

Product/ingredient name	Test	Experiment	Result
12-hydroxystearic acid	471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative
	476 In vitro Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Mammalian-Animal	Negative
	473 In vitro Mammalian Chromosomal Aberration Test	Experiment: In vitro Subject: Mammalian-Animal Cell: Germ	Negative

Conclusion/Summary : No mutagenic effect.

Carcinogenicity

Conclusion/Summary : No carcinogenic effect. (similar material)
Is not on the lists of carcinogens or potential carcinogens.

Reproductive toxicity

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SECTION 11: Toxicological information

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
12-hydroxystearic acid	Negative	Negative	-	Rat - Male, Female	Oral	-

Conclusion/Summary : Not considered to be toxic to the reproductive system. (similar material)

Teratogenicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on likely routes of exposure :  Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

- Eye contact** : May cause mild eye irritation. redness
- Inhalation** : May cause respiratory and mucous membrane irritation and coughing
- Skin contact** : Direct contact may cause irritation and sensitization dermatitis in person previously exposed.
- Ingestion** : May result in intestinal obstruction.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

- Potential immediate effects** : No known significant effects or critical hazards.
- Potential delayed effects** : No known significant effects or critical hazards.

Long term exposure

- Potential immediate effects** : No known significant effects or critical hazards.
- Potential delayed effects** : No known significant effects or critical hazards.

Potential chronic health effects

Product/ingredient name	Result	Species	Dose	Exposure
 12-hydroxystearic acid	Sub-chronic NOAEL Dermal	Rat	>200 mg/kg (similar material)	-
	Sub-acute NOAEL Oral	Rat	1000 mg/kg	-

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SECTION 11: Toxicological information

Conclusion/Summary	: Based on available data, the classification criteria are not met.
General	: No known significant effects or critical hazards.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Reproductive toxicity	: No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
12-hydroxystearic acid	Acute EC10 453.8 mg/l	Micro-organism	3 hours
	Acute ErC50 >0.976 mg/l No toxicity at the limit of water solubility. Fresh water	Algae - <i>Pseudokirchnerella subcapitata</i>	72 hours
	Acute ErC50 >0.976 mg/l No toxicity at the limit of water solubility. Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 0.447 mg/l	Fish - <i>Danio rerio</i>	96 hours
	Chronic NOEC >0.976 mg/l No toxicity at the limit of water solubility.	Algae - <i>Pseudokirchneriella subcapitata</i>	72 hours

Conclusion/Summary : Very toxic to aquatic life.

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
12-hydroxystearic acid	301C Ready Biodegradability - Modified MITI Test (I)	93 % - 28 days	-	-

Conclusion/Summary : Readily biodegradable.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
12-hydroxystearic acid	-	-	Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
12-hydroxystearic acid	5.7	56	Low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : 902.5

Mobility : Expected to be biodegradable.

12-HYDROXYSTEARIC ACID

SECTION 12: Ecological information

12.5 Results of PBT and vPvB assessment

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
12-hydroxystearic acid	No	No	No	No	No	No	No

12.6 Endocrine disrupting properties

Not available.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

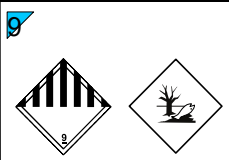
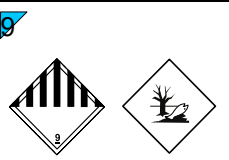
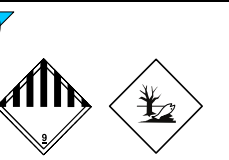
Hazardous waste : ☒ The classification of the product may meet the criteria for a hazardous waste.

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

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	☒ UN3077	☒ UN3077	☒ UN3077	☒ UN3077
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (12-hydroxystearic acid)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (12-hydroxystearic acid)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (12-hydroxystearic acid)	Environmentally hazardous substance, solid, n.o.s. (12-hydroxystearic acid)
14.3 Transport hazard class(es)				

12-HYDROXYSTEARIC ACID

SECTION 14: Transport information

14.4 Packing group	III	III	III	III
14.5 Environmental hazards	Yes.	Yes.	Marine pollutant	Yes.

Additional information

ADR/RID

: This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

Hazard identification number 90

Limited quantity 5 kg

Special provisions 274, 335, 601, 375

Tunnel code (-)

ADN

: This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

Special provisions 274, 335, 375, 601

IMDG

: This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

Emergency schedules F-A, S-F

Special provisions 274, 335, 966, 967, 969

IATA

: This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

Quantity limitation Passenger and Cargo Aircraft: 400 kg. Packaging instructions: 956. Cargo Aircraft Only: 400 kg. Packaging instructions: 956. Limited Quantities - Passenger Aircraft: 30 kg. Packaging instructions: Y956.

Special provisions A97, A158, A179, A197, A215

14.6 Special precautions for user

: **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Maritime transport in bulk according to IMO instruments

: Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

No listed substance

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SECTION 15: Regulatory information

Other EU regulations

Explosive precursors : Not applicable.

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category

1

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

15.2 Chemical safety assessment : Complete.

SECTION 16: Other information

POISON CENTER / Supplier notification : FR IT NL ES SE

Indicates information that has changed from previously issued version.

Abbreviations and acronyms :

- ATE = Acute Toxicity Estimate
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- DMEL = Derived Minimal Effect Level
- DNEL = Derived No Effect Level
- EUH statement = CLP-specific Hazard statement
- N/A = Not available
- PBT = Persistent, Bioaccumulative and Toxic
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number
- vPvB = Very Persistent and Very Bioaccumulative

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SECTION 16: Other information

Key literature references and sources for data : Regulation (EC) No. 1272/2008 [CLP]; European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), concluded in Geneva on 30 September 1957 plus amendments (Uniform text: Journal of Laws 27/2009 pos. 162 plus amendments); European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN); Occupational exposure limits; International regulations

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Aquatic Acute 1, H400	On basis of test data

Full text of abbreviated H statements

H400	Very toxic to aquatic life.
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Full text of classifications [CLP/GHS]

Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
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Training advice : Ensure operatives are trained to minimise exposures. Training staff on good practice.

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Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.