



SAFETY DATA SHEET

CLP
English

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

1.1 Product identifier

Product name VANLUBE® W-324

Product Code 51155

Chemical name Not available.

Other means of identification dialkylammonium tungstate in oil

Product type Liquid.

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

Lubricant additives

1.3 Details of the supplier of the safety data sheet

Vanderbilt Chemicals, LLC
30 Winfield Street
Norwalk, CT 06855

e-mail address of person responsible for this SDS

SDS@vanderbiltglobalservices.com

National contact

Vanderbilt Worldwide Ltd
Unit 12, Alvaston Business Park,
Middlewich Road, Nantwich,
Cheshire CW5 6PF
United Kingdom

Telephone number: +44 1270 623978

1.4 Emergency telephone number

National advisory body/Poison Center

Telephone number Chemtrec: +1-800-424-9300
Outside US: +1-703-527-3887

Supplier

Telephone number 1-203-853-1400
Hours of operation 24 hours

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition Mixture

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

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

Classification Skin Sens. 1A, H317
Aquatic Acute 1, H400
Aquatic Chronic 1, H410

SECTION 2: Hazards identification

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

Ingredients of unknown ecotoxicity

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 55%

2.2 Label elements**Hazard pictograms****Signal word**

Warning

Hazard statements

May cause an allergic skin reaction.

Very toxic to aquatic life with long lasting effects.

Precautionary statements**General**

Not applicable.

Prevention

Wear protective gloves: > 8 hours (breakthrough time): neoprene. Avoid release to the environment. Avoid breathing vapor.

Response

IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical attention.

Storage

Not applicable.

Disposal

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

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

Restricted to professional users.

2.3 Other hazards**Other hazards which do not result in classification**

None known.

SECTION 3: Composition/information on ingredients**Substance/mixture**

Mixture

Ingredient name	Identifiers	% by weight	Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]	Type
petroleum process oil, <3.0% DMSO extractable material	REACH #: 01-2119467170-45-XXXX EC: 265-155-0 CAS: 64742-52-5	40 - 70	Not classified.	-
amines, bis(C11-14-branched and linear alkyl), tungstates	REACH #: 01-2119949643-29-XXXX CAS: 1159919-46-6	30 - 60	Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	[1]

SECTION 3: Composition/information on ingredients

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.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

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

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern

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. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact

Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of first-aiders

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact

No known significant effects or critical hazards.

Inhalation

No known significant effects or critical hazards.

Skin contact

May cause an allergic skin reaction.

Ingestion

No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact

No specific data.

SECTION 4: First aid measures

Inhalation	No specific data.
Skin contact	Adverse symptoms may include the following: irritation redness
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	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	In a fire or if heated, a pressure increase will occur and the container may burst. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Hazardous thermal decomposition products	Decomposition products may include the following materials: carbon dioxide carbon monoxide metal oxide/oxides

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 spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	If specialized 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

SECTION 6: Accidental release measures

Avoid dispersal of spilled 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 materials for containment and cleaning up

Small spill

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

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). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. 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 unlabeled containers. Use appropriate containment to avoid environmental contamination.

Seveso Directive - Reporting thresholds (in tonnes)

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
E1: Hazardous to the aquatic environment - Acute 1 or Chronic 1	100	200
C9i: Very toxic for the environment	100	200

7.3 Specific end use(s)

SECTION 7: Handling and storage

Recommendations	Not available.
Industrial sector specific solutions	Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters**Occupational exposure limits**

Product/ingredient name	Exposure limit values
petroleum process oil, <3.0% DMSO extractable material	ACGIH TLV (United States, 1/2011). TWA: 5 mg/m ³ 8 hours. Form: Inhalable fraction ACGIH TLV (United States). STEL: 10 mg/m ³

Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. 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

No DNELs/DMELs available.

PNECs

No PNECs available.

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. Contaminated work clothing should not be allowed out of the workplace. 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: splash goggles

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. > 8 hours (breakthrough time): neoprene

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. Recommended: lab coat

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.

Environmental exposure controls

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.

Personal protective equipment (Pictograms)



SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	Liquid.
Color	Straw to Black.
Odor	Not available.
Odor threshold	Not available.
pH	6.5 to 6.9 (For amines, bis(C11-14-branched and linear alkyl), tungstates)
Melting point/freezing point	<-80°C (For amines, bis(C11-14-branched and linear alkyl), tungstates)
Initial boiling point and boiling range	Not available.
Flash point	Closed cup: >140°C [Pensky-Martens.]
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	Not available.
Vapor pressure	0.0000005 kPa [room temperature] (For amines, bis(C11-14-branched and linear alkyl), tungstates)
Vapor density	Not available.
Density	1.05 g/cm ³ [25°C (77°F)]
Relative density	1.05
Solubility(ies)	Insoluble in the following materials: cold water.
Solubility in water	0.00000948 g/l (For amines, bis(C11-14-branched and linear alkyl), tungstates)

SECTION 9: Physical and chemical properties

Partition coefficient: n-octanol/ water	>8 (For amines, bis(C11-14-branched and linear alkyl), tungstates)
Auto-ignition temperature	349 to 352°C (For amines, bis(C11-14-branched and linear alkyl), tungstates)
Decomposition temperature	>250°C (For amines, bis(C11-14-branched and linear alkyl), tungstates)
Viscosity	Not available.
Explosive properties	Not available.
Oxidizing properties	Not available.

9.2 Other information

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.
10.4 Conditions to avoid	No specific data.
10.5 Incompatible materials	No specific data.
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
petroleum process oil, <3.0% DMSO extractable material	LD50 Dermal	Rabbit	>2000 mg/kg	-
amines, bis (C11-14-branched and linear alkyl), tungstates	LD50 Oral	Rat	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-

Acute toxicity estimates

Not available.

Irritation/Corrosion

Not available.

Conclusion/Summary**Skin**

Amines, bis(C11-14-branched and linear alkyl), tungstates: Non-irritating to the skin based on data from in vitro skin irritation test using a human skin model. The skin irritation potential was tested through topical application for 15 minutes, after which a 44 hour post-incubation period was allowed.

SECTION 11: Toxicological information**Eyes**

Amines, bis(C11-14-branched and linear alkyl), tungstates: Non-irritating to the eye based on data from the Bovine Corneal Opacity and Permeability Test (BCOP). The eye irritation potential was tested through topical application for 10 minutes (+ or - 1 minute), after which an in vitro irritancy score (IVIS) of 2.6 was given.

Sensitization

Product/ingredient name	Route of exposure	Species	Result
amines, bis (C11-14-branched and linear alkyl), tungstates	skin	Mouse	Sensitizing

Conclusion/Summary**Skin**

Not available.

Mutagenicity

Product/ingredient name	Test	Experiment	Result
amines, bis (C11-14-branched and linear alkyl), tungstates	OECD 471	Experiment: In vitro Subject: Bacteria	Negative

Carcinogenicity

Not available.

Conclusion/Summary

Not available.

Reproductive toxicity

Not available.

Conclusion/Summary

Not available.

Teratogenicity

Not available.

Conclusion/Summary

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal.

Potential acute health effects**Eye contact**

No known significant effects or critical hazards.

Inhalation

No known significant effects or critical hazards.

Skin contact

May cause an allergic skin reaction.

Ingestion

No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics**Eye contact**

No specific data.

SECTION 11: Toxicological information

Inhalation	No specific data.
Skin contact	Adverse symptoms may include the following: irritation redness
Ingestion	No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure**Short term exposure**

Potential immediate effects	Not available.
Potential delayed effects	Not available.

Long term exposure

Potential immediate effects	Not available.
Potential delayed effects	Not available.

Potential chronic health effects

Not available.

Conclusion/Summary	Not available.
General	Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Teratogenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.

Other information	Not available.
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SECTION 12: Ecological information**12.1 Toxicity**

Product/ingredient name	Result	Species	Exposure
amines, bis (C11-14-branched and linear alkyl), tungstates	Acute EC50 0.00088 mg/l	Algae	72 hours
	Acute EC50 4.6 mg/l	Daphnia	48 hours
	Acute NOEC 0.00015 mg/l	Algae	72 hours

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
amines, bis (C11-14-branched and linear alkyl), tungstates	OECD 301B	31 % - Not readily - 14 days	23.1 mg/l	Activated sludge

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
amines, bis (C11-14-branched and linear alkyl), tungstates	-	-	Not readily

12.3 Bioaccumulative potential

SECTION 12: Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
amines, bis (C11-14-branched and linear alkyl), tungstates	>8	-	high

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) Not available.

Mobility Not available.

12.5 Results of PBT and vPvB assessment

PBT Not applicable.

vPvB Not applicable.

12.6 Other adverse effects No known significant effects or critical hazards.

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 minimized 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 minimized 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-	-		-
TDG Classification	Not regulated.	-	-	-		-

SECTION 14: Transport information

ADR/RID Class	3082	Environmentally hazardous substance, liquid, n.o.s. (amines, bis(C11-14-branched and linear alkyl), tungstates)	9	III	 	Remarks Marine pollutant
IMDG Class	3082	Environmentally hazardous substance, liquid, n.o.s. (amines, bis(C11-14-branched and linear alkyl), tungstates)	9	III	 	Remarks Marine pollutant
IATA-DGR Class	3082	Environmentally hazardous substance, liquid, n.o.s. (amines, bis(C11-14-branched and linear alkyl), tungstates)	9	III	 	Remarks Marine pollutant

PG* : Packing group

SECTION 15: Regulatory information

Europe inventory At least one component is not listed in EINECS but all such components are listed in ELINCS. Please contact your supplier for information on the inventory status of this material.

EINECS: European Inventory. This product contains the following chemical(s) for which one or more Pre-Market Notifications have been filed. Should you wish to export products containing this product into an EC country, contact Product Risk Manager at Vanderbilt Global Services, LLC at 203-295-2143 for more information. Chemical name: amines, bis(C11-14-branched and linear alkyl), tungstates
CAS no. 1159919-46-6

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 authorization****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 Restricted to professional users.

Other EU regulations**Seveso Directive**

This product is controlled under the Seveso Directive.

Danger criteria

SECTION 15: Regulatory information**Category**

E1: Hazardous to the aquatic environment - Acute 1 or Chronic 1
 C9i: Very toxic for the environment

National regulations**Germany**

Hazard class for water 2 Appendix No. 4

International regulations**Chemical Weapon Convention List Schedules I, II & III Chemicals**

Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Inform Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

International lists**United States inventory (TSCA 8b)**

All components are listed or exempted.

Canada inventory

At least one component is not listed in DSL but all such components are listed in NDSL.

Australia inventory (AICS)

Not determined.

China inventory (IECSC)

Not determined.

Japan inventory (ENCS)

Not determined.

Korea inventory (KECI)

Not determined.

New Zealand Inventory of Chemicals (NZIoC)

Not determined.

Philippines inventory (PICCS)

Not determined.

**15.2 Chemical Safety
Assessment**

This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

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
 PBT = Persistent, Bioaccumulative and Toxic
 PNEC = Predicted No Effect Concentration
 RRN = REACH Registration Number
 vPvB = Very Persistent and Very Bioaccumulative

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

SECTION 16: Other information

Classification	Justification
Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	Expert judgment Calculation method Calculation method

Europe**Full text of abbreviated H statements**

H317	May cause an allergic skin reaction.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS]

Aquatic Acute 1, H400	AQUATIC HAZARD (ACUTE) - Category 1
Aquatic Chronic 1, H410	AQUATIC HAZARD (LONG-TERM) - Category 1
Skin Sens. 1A, H317	SKIN SENSITIZATION - Category 1A

History

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