

SAFETY DATA SHEET**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier**

Product name	Castrol Radicool Si-OAT
Product code	468096-DE51
SDS no.	468096
Product type	Liquid.

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

Use of the substance/ mixture	Coolant and antifreeze. For specific application advice see appropriate Technical Data Sheet or consult our company representative.
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1.3 Details of the supplier of the safety data sheet

Supplier	Nordic Lubricants A/S Arne Jacobsens Alle 7, 5. 2300 København S Denmark
	Telephone number:+45 70 80 70 54 Fax number:+45 70 24 71 06
E-mail address	MSDSadvice@bp.com

1.4 Emergency telephone number

EMERGENCY TELEPHONE NUMBER	Carechem: +44 (0) 1235 239 670 (24/7)
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SECTION 2: Hazards identification**2.1 Classification of the substance or mixture**

Product definition	Mixture
<u>Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]</u>	
Acute Tox. 4, H302 STOT RE 2, H373	
See Section 16 for the full text of the H statements declared above.	
See sections 11 and 12 for more detailed information on health effects and symptoms and environmental hazards.	

2.2 Label elements**Hazard pictograms**

Signal word	Warning
Hazard statements	H302 - Harmful if swallowed. H373 - May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention	P260 - Do not breathe vapour. P270 - Do not eat, drink or smoke when using this product. P264 - Wash hands thoroughly after handling.
Response	P314 - Get medical attention if you feel unwell. P301 + P312 , P330 - IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth.
Storage	Not applicable.
Disposal	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazardous ingredients	Ethylene glycol

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SECTION 2: Hazards identification

Supplemental label elements Not applicable.

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

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 Yes, applicable.

2.3 Other hazards

Results of PBT and vPvB assessment Product does not meet the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Product definition Mixture

Ethylene glycol; ethanediol.

Product/ingredient name	Identifiers	%	Regulation (EC) No. 1272/2008 [CLP]	Type
Ethylene glycol	REACH #: 01-2119456816-28 EC: 203-473-3 CAS: 107-21-1 Index: 603-027-00-1	≥90	Acute Tox. 4, H302 STOT RE 2, H373 (kidneys) (oral)	[1] [2]

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
 - [6] Additional disclosure due to company policy
- Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention if irritation develops.

Skin contact In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if irritation develops.

Inhalation If inhaled, remove to fresh air. Get medical attention if symptoms occur.

Ingestion Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Get medical attention. If ingested, call a physician or Poison Control Center immediately. Get medical attention urgently informing the doctor that a product containing ethylene glycol has been ingested and specific treatment may be required. Transport casualty together with the product container, its label, or the safety data sheet urgently to hospital. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately.

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.

4.2 Most important symptoms and effects, both acute and delayed

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SECTION 4: First aid measures

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

Potential acute health effects

Inhalation	Vapour inhalation under ambient conditions is not normally a problem due to low vapour pressure.
Ingestion	Harmful if swallowed. Ethylene glycol: Ingestion of ethylene glycol can cause metabolic acidosis, kidney damage, central nervous system depression, and convulsions. The estimated human lethal dose is approximately 100 ml (3.4 ounces for an adult).
Skin contact	No known significant effects or critical hazards.
Eye contact	No known significant effects or critical hazards.

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

Inhalation	Overexposure to the inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.
Ingestion	Ingestion of large quantities may cause nausea and diarrhoea.
Skin contact	Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.
Eye contact	Potential risk of transient stinging or redness if accidental eye contact occurs.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Specific treatments	Ethylene Glycol: Gastric irrigation, ethanol or fomepizole may have value in treatment. Consult physician.
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SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	In case of fire, use water fog, alcohol resistant foam, dry chemical or carbon dioxide extinguisher or spray.
Unsuitable extinguishing media	Do not use water jet. The use of a water jet may cause the fire to spread by splashing the burning product.

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.
Hazardous combustion products	Combustion products may include the following: carbon oxides (CO, CO ₂) (carbon monoxide, carbon dioxide)

5.3 Advice for firefighters

Special precautions for fire-fighters	No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.
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	Contact 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. Floors may be slippery; use care to avoid falling. Avoid breathing vapour or mist. Provide adequate ventilation. Put on appropriate personal protective equipment.
For emergency responders	Entry into a confined space or poorly ventilated area contaminated with vapour, mist or fume is extremely hazardous without the correct respiratory protective equipment and a safe system of work. Wear self-contained breathing apparatus. Wear a suitable chemical protective suit. Chemical resistant boots. 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).

6.3 Methods and material for containment and cleaning up

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SECTION 6: Accidental release measures

Small spill	Stop leak if without risk. Move containers from spill area. Absorb with an inert 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 the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. 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. Contaminated absorbent material may pose the same hazard as the spilt product. Dispose of via a licensed waste disposal contractor.
6.4 Reference to other sections	See Section 1 for emergency contact information. See Section 5 for firefighting measures. See Section 8 for information on appropriate personal protective equipment. See Section 12 for environmental precautions. 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. Do not breathe vapour or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Do not reuse container. Empty containers retain product residue and can be hazardous.
Advice on general occupational hygiene	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. 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

Not suitable

Store in accordance with local regulations. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Keep away from heat and direct sunlight. 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. Store and use only in equipment/containers designed for use with this product. Do not store in unlabelled containers.

Prolonged exposure to elevated temperature

7.3 Specific end use(s)

Recommendations

See section 1.2 and Exposure scenarios in annex, if applicable.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
Ethylene glycol	Ministers Cabinet Regulations Nr.325 - AER (Latvia). Absorbed through skin. TWA: 52 mg/m ³ 8 hours. Issued/Revised: 11/2004 TWA: 20 ppm 8 hours. Issued/Revised: 11/2004 STEL: 40 ppm 15 minutes. Issued/Revised: 11/2004 STEL: 104 mg/m ³ 15 minutes. Issued/Revised: 11/2004

Whilst specific OELs for certain components may be shown in this section, other components may be present in any mist, vapour or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

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.

Derived No Effect Level

No DNELs/DMELs available.

Predicted No Effect Concentration

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No PNECs available

8.2 Exposure controls

Appropriate engineering controls

Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits. All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained. Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards. The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

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. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures should be developed for each intended application. Respiratory protection equipment should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Eye/face protection

Safety glasses with side shields.

Skin protection

Hand protection

General Information:

Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. The correct choice of protective gloves depends upon the chemicals being handled, and the conditions of work and use. Most gloves provide protection for only a limited time before they must be discarded and replaced (even the best chemically resistant gloves will break down after repeated chemical exposures).

Gloves should be chosen in consultation with the supplier / manufacturer and taking account of a full assessment of the working conditions.

Recommended: Butyl gloves.
Neoprene gloves.

Breakthrough time:

Breakthrough time data are generated by glove manufacturers under laboratory test conditions and represent how long a glove can be expected to provide effective permeation resistance. It is important when following breakthrough time recommendations that actual workplace conditions are taken into account. Always consult with your glove supplier for up-to-date technical information on breakthrough times for the recommended glove type. Our recommendations on the selection of gloves are as follows:

Continuous contact:

Gloves with a minimum breakthrough time of 240 minutes, or >480 minutes if suitable gloves can be obtained.

If suitable gloves are not available to offer that level of protection, gloves with shorter breakthrough times may be acceptable as long as appropriate glove maintenance and replacement regimes are determined and adhered to.

Short-term / splash protection:

Recommended breakthrough times as above.

It is recognised that for short-term, transient exposures, gloves with shorter breakthrough times may commonly be used. Therefore, appropriate maintenance and replacement regimes must be determined and rigorously followed.

Glove Thickness:

For general applications, we recommend gloves with a thickness typically greater than 0.35 mm.

It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent

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SECTION 8: Exposure controls/personal protection

on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.

Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers' technical data should always be taken into account to ensure selection of the most appropriate glove for the task.

Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:

- Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.
- Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential.

Skin and body

Use of protective clothing is good industrial practice.

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.

Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.

Refer to standards:

Respiratory protection: EN 529
 Gloves: EN 420, EN 374
 Eye protection: EN 166
 Filtering half-mask: EN 149
 Filtering half-mask with valve: EN 405
 Half-mask: EN 140 plus filter
 Full-face mask: EN 136 plus filter
 Particulate filters: EN 143
 Gas/combined filters: EN 14387

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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	Liquid.
Colour	Pink.
Odour	Not available.
Odour threshold	Not available.
pH	8 [Conc. (% w/w): 100%]
Melting point/freezing point	<-18°C (<-0.4°F)
Initial boiling point and boiling range	>160°C (>320°F)
Flash point	Closed cup: >124°C (>255.2°F) [Pensky-Martens.]
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	Lower: 3.4% Upper: 15.1%
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	Not available.
Density	1122 to 1125 kg/m ³ (1.122 to 1.125 g/cm ³) at 20°C
Solubility(ies)	Miscible in water.
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature	Not available.

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SECTION 9: Physical and chemical properties

Decomposition temperature	Not available.
Viscosity	Kinematic: 20 to 30 mm ² /s (20 to 30 cSt) at 20°C
Explosive properties	Not available.
Oxidising properties	Not available.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.
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	Avoid excessive heat.
10.5 Incompatible materials	Reactive or incompatible with the following materials: 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 estimates

Route	ATE value
Oral	500 mg/kg

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

Potential acute health effects

Inhalation	Vapour inhalation under ambient conditions is not normally a problem due to low vapour pressure.
Ingestion	Harmful if swallowed. Ethylene glycol: Ingestion of ethylene glycol can cause metabolic acidosis, kidney damage, central nervous system depression, and convulsions. The estimated human lethal dose is approximately 100 ml (3.4 ounces for an adult).
Skin contact	No known significant effects or critical hazards.
Eye contact	No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	May be harmful by inhalation if exposure to vapour, mists or fumes resulting from thermal decomposition products occurs.
Ingestion	No specific data.
Skin contact	No specific data.
Eye contact	No specific data.

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

Inhalation	Overexposure to the inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.
Ingestion	Ingestion of large quantities may cause nausea and diarrhoea.
Skin contact	Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.
Eye contact	Potential risk of transient stinging or redness if accidental eye contact occurs.

Potential chronic health effects

General	May cause damage to organs through prolonged or repeated exposure. May cause damage to organs through prolonged or repeated exposure. (kidney)
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Developmental effects	Birth defects and decreased fetal weight have been observed in laboratory animals fed ethylene glycol in large amounts repeatedly during pregnancy.

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SECTION 11: Toxicological information

Fertility effects No known significant effects or critical hazards.

SECTION 12: Ecological information

12.1 Toxicity

Environmental hazards Not classified as dangerous

12.2 Persistence and degradability

Expected to be biodegradable.

12.3 Bioaccumulative potential

This product is not expected to bioaccumulate through food chains in the environment.

12.4 Mobility in soil

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

Mobility Spillages may penetrate the soil causing ground water contamination.

12.5 Results of PBT and vPvB assessment

Product does not meet the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII.

12.6 Other adverse effects

Other ecological information Miscible in water.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Methods of disposal Undiluted fluid Where possible, arrange for product to be recycled. Dispose of via an authorised person/ licensed waste disposal contractor in accordance with local regulations. Diluted Fluid Diluted fluid should not be discharged into sewage systems unless provided for by local regulations. Dispose under conditions approved by the local authority or via a licensed waste disposal contractor.

Hazardous waste Yes.

European waste catalogue (EWC)

Waste code	Waste designation
16 01 14*	antifreeze fluids containing hazardous substances

However, deviation from the intended use and/or the presence of any potential contaminants may require an alternative waste disposal code to be assigned by the end user.

Packaging

Methods of disposal Where possible, arrange for product to be recycled. Dispose of via an authorised person/ licensed waste disposal contractor in accordance with local regulations.

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. Empty containers represent a fire hazard as they may contain flammable product residues and vapour. Never weld, solder or braze empty containers. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

References

Commission 2014/955/EU
Directive 2008/98/EC

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-

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SECTION 14: Transport information				
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.
Additional information	-	-	-	-

14.6 Special precautions for user Not available.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code 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.

Other regulations

REACH Status For the REACH status of this product please consult your company contact, as identified in Section 1.

United States inventory (TSCA 8b) All components are listed or exempted.

Australia inventory (AICS) At least one component is not listed.

Canada inventory At least one component is not listed.

China inventory (IECSC) All components are listed or exempted.

Japan inventory (ENCS) At least one component is not listed.

Korea inventory (KECI) All components are listed or exempted.

Philippines inventory (PICCS) At least one component is not listed.

Taiwan Chemical Substances Inventory (TCSI) At least one component is not listed.

Ozone depleting substances (1005/2009/EU)

Not listed.

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

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

15.2 Chemical safety assessment A Chemical Safety Assessment has been carried out for one or more of substances within this mixture. A Chemical Safety Assessment has not been carried out for the mixture itself.

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SECTION 16: Other information

Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
 ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
 ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 CAS = Chemical Abstracts Service
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
 CSA = Chemical Safety Assessment
 CSR = Chemical Safety Report
 DMEL = Derived Minimal Effect Level
 DNEL = Derived No Effect Level
 EINECS = European Inventory of Existing Commercial chemical Substances
 ES = Exposure Scenario
 EUH statement = CLP-specific Hazard statement
 EWC = European Waste Catalogue
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 OECD = Organisation for Economic Co-operation and Development
 PBT = Persistent, Bioaccumulative and Toxic
 PNEC = Predicted No Effect Concentration
 REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006]
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
 RRN = REACH Registration Number
 SADT = Self-Accelerating Decomposition Temperature
 SVHC = Substances of Very High Concern
 STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
 STOT-SE = Specific Target Organ Toxicity - Single Exposure
 TWA = Time weighted average
 UN = United Nations
 UVCB = Complex hydrocarbon substance
 VOC = Volatile Organic Compound
 vPvB = Very Persistent and Very Bioaccumulative
 Varies = may contain one or more of the following 101316-69-2 / RRN 01-2119486948-13, 101316-70-5, 101316-71-6, 101316-72-7 / RRN 01-2119489969-06, 64741-88-4 / RRN 01-2119488706-23, 64741-89-5 / RRN 01-2119487067-30, 64741-95-3 / RRN 01-2119487081-40, 64741-96-4 / RRN 01-2119483621-38, 64741-97-5 / RRN 01-2119480374-36, 64742-01-4 / RRN 01-2119488707-21, 64742-44-5 / RRN 01-2119985177-24, 64742-45-6, 64742-52-5 / RRN 01-2119467170-45, 64742-53-6 / RRN 01-2119480375-34, 64742-54-7 / RRN 01-2119484627-25, 64742-55-8 / RRN 01-2119487077-29, 64742-56-9 / RRN 01-2119480132-48, 64742-57-0 / RRN 01-2119489287-22, 64742-58-1, 64742-62-7 / RRN 01-2119480472-38, 64742-63-8, 64742-64-9, 64742-65-0 / RRN 01-2119471299-27, 64742-70-7 / RRN 01-2119487080-42, 72623-85-9 / RRN 01-211955262-43, 72623-86-0 / RRN 01-2119474878-16, 72623-87-1 / RRN 01-2119474889-13, 74869-22-0 / RRN 01-2119495601-36, 90669-74-2 / RRN 01-2119970171-43

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

Classification	Justification
Acute Tox. 4, H302 STOT RE 2, H373	Calculation method Calculation method

Full text of abbreviated H statements H302
H373 (oral) Harmful if swallowed.
May cause damage to organs through prolonged or repeated exposure if swallowed.

Full text of classifications [CLP/GHS] Acute Tox. 4, H302 ACUTE TOXICITY (oral) - Category 4
STOT RE 2, H373 (oral) SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE (oral) - Category 2

History

Date of issue/ Date of revision 19/11/2018.

Date of previous issue 23/10/2018.

Prepared by Product Stewardship

Indicates information that has changed from previously issued version.

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SECTION 16: Other information

Notice to reader

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from BP Group.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken. You can contact the BP Group to ensure that this document is the most current available. Alteration of this document is strictly prohibited.

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