



SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

SDS # : 33531

EPONA Z 320

Date of the previous version: 2019-03-04

Revision Date: 2019-04-29

Version 9

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name	EPONA Z 320
Number	EXN
Substance/mixture	Mixture

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

Identified uses	Industrial gear oil.
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1.3. Details of the supplier of the safety data sheet

Supplier	TOTAL LUBRIFIANTS 562 Avenue du Parc de L'île 92029 Nanterre Cedex FRANCE Tél: +33 (0)1 41 35 40 00 Fax: +33 (0)1 41 35 84 71
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For further information, please contact:

Contact Point	HSE
E-mail Address	rm.msds-lubs@total.com

1.4. Emergency telephone number

Emergency telephone: +44 1235 239670
 France - ORFILA (INRS) Tél : +33 (0)1 45 42 59 59
 In France - Poison centers:
 ANGERS : 02 41 48 21 21
 BORDEAUX : 05 56 96 40 80
 LILLE : 08 00 59 59 59
 LYON : 04 72 11 69 11
 MARSEILLE : 04 91 75 25 25
 NANCY : 03 83 22 50 50
 PARIS : 01 40 05 48 48
 STRASBOURG : 03 88 37 37 37
 TOULOUSE : 05 61 77 74 47

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

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REGULATION (EC) No 1272/2008

For the full text of the H-Statements mentioned in this Section, see Section 2.2.

Classification

The product is classified as dangerous in accordance with Regulation (EC) No. 1272/2008
 Chronic aquatic toxicity - Category 3 - (H412)

2.2. Label elements

Labelled according to REGULATION (EC) No 1272/2008

Signal word

None

Hazard Statements

H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements

P273 - Avoid release to the environment

P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

Supplemental Hazard Statements

EUH208 - Contains Amines, C10-14-tert-alkyl. May produce an allergic reaction

2.3. Other hazards**Physical-Chemical Properties** Contaminated surfaces will be extremely slippery.**Environmental properties** The product may form an oil film on the water surface that may stop the oxygen exchange.**Section 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.2. Mixture**Chemical nature** Mineral oil of petroleum origin.**Hazardous ingredients**

Chemical Name	EC-No	REACH registration No	CAS-No	Weight %	Classification (Reg. 1272/2008)
2,6-di-tert-butylphenol	204-884-0	01-2119490822-33	128-39-2	0.1-<0.25	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) Skin Irrit. 2 (H315) Acute M factor = 1
Amines, C10-14-tert-alkyl	701-175-2	01-2119456798-18	^	0.1-<0.25	STOT SE 3 (H335) Skin Corr. 1B (H314) Eye Dam. 1 (H318) Skin Sens. 1A (H317) Acute Tox. 4 (H302) Acute Tox. 3 (H311) Acute Tox. 2 (H330) Aquatic Acute 1 (H400)

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					Aquatic Chronic 1 (H410) Acute M factor = 1 Chronic M factor = 1
C16-18-(even numbered, saturated and unsaturated)-alkylamines	627-034-4	01-2119473797-19	1213789-63-9	0.01-<0.025	STOT SE 3 (H335) STOT RE 2 (H373) Asp. Tox. 1 (H304) Eye Dam. 1 (H318) Skin Corr. 1B (H314) Acute Tox. 4 (H302) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) Acute Factor M 10 Acute Chronic M 10

Additional information Product containing mineral oil with less than 3% DMSO extract as measured by IP 346.

For the full text of the H-Statements mentioned in this Section, see Section 16.

Section 4: FIRST AID MEASURES

4.1. Description of first-aid measures

General advice	IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR EMERGENCY MEDICAL CARE.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash contaminated clothing before reuse. High pressure jets may cause skin damage. Take victim immediately to hospital.
Inhalation	Remove casualty to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration.
Ingestion	Clean mouth with water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately.
Protection of First-aiders	First aider needs to protect himself. See Section 8 for more detail. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

4.2. Most important symptoms and effects, both acute and delayed

Eye contact	Not classified based on available data.
Skin contact	Not classified based on available data. May produce an allergic reaction. High pressure injection of the products under the skin may have very serious consequences even though no symptom or injury may be apparent.
Inhalation	Not classified based on available data. Inhalation of vapors in high concentration may cause irritation of respiratory system.
Ingestion	Not classified based on available data. Ingestion may cause gastrointestinal irritation,

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nausea, vomiting and diarrhea.

4.3. Indication of any immediate medical attention and special treatment needed**Notes to physician** Treat symptomatically.**Section 5: FIRE-FIGHTING MEASURES**5.1. Extinguishing media**Suitable Extinguishing Media** Carbon dioxide (CO₂). ABC powder. Foam. Water spray or fog.**Unsuitable Extinguishing Media** Do not use a solid water stream as it may scatter and spread fire.5.2. Special hazards arising from the substance or mixture**Special Hazard** Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration. Combustion products include sulphur oxides (SO₂ and SO₃) and Hydrogen sulphide H₂S. Mercaptans. Nitrogen oxides (NO_x). Phosphorous oxides. Silicon dioxide,5.3. Advice for fire-fighters**Special protective equipment for fire-fighters** Wear self-contained breathing apparatus and protective suit.**Other information** Cool containers / tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.**Section 6: ACCIDENTAL RELEASE MEASURES**6.1. Personal precautions, protective equipment and emergency procedures**General Information** Do not touch or walk through spilled material. Contaminated surfaces will be extremely slippery. Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition.6.2. Environmental precautions**General Information** Do not allow material to contaminate ground water system. Prevent entry into waterways, sewers, basements or confined areas. Local authorities should be advised if significant spillages cannot be contained.6.3. Methods and material for containment and cleaning up**Methods for containment** Dike to collect large liquid spills. If necessary dike the product with dry earth, sand or similar non-combustible materials.**Methods for cleaning up** Dispose of contents/container in accordance with local regulation. In case of soil contamination, remove contaminated soil for remediation or disposal, in accordance with



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local regulations.

6.4. Reference to other sections**Personal Protective Equipment** See Section 8 for more detail.**Waste treatment** See section 13.**Section 7: HANDLING AND STORAGE**7.1. Precautions for safe handling**Advice on safe handling** For personal protection see section 8. Use only in well-ventilated areas. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing.**Prevention of fire and explosion** Take precautionary measures against static discharges.**Hygiene measures** Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Provide regular cleaning of equipment, work area and clothing. Do not use abrasives, solvents or fuels. Do not dry hands with rags that have been contaminated with product. Do not put product contaminated rags into workwear pockets.7.2. Conditions for safe storage, including any incompatibilities**Technical measures/Storage conditions** Keep away from food, drink and animal feedingstuffs. Keep in a banded area. Keep container tightly closed. Keep preferably in the original container. Otherwise reproduce all indication of the regulation label on the new container. Do not remove the hazard labels of the containers (even if they are empty). Design the installations in order to avoid accidental emissions of product (due to seal breakage, for example) onto hot casings or electrical contacts. Store at room temperature. Protect from moisture.**Materials to Avoid** Strong oxidizing agents.7.3. Specific end uses**Specific use(s)** Please refer to Technical Data Sheet for further information.**Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1. Control parameters**Exposure limits** Mineral oil mist:
USA: OSHA (PEL) TWA 5 mg/m³, NIOSH (REL) TWA 5 mg/m³, STEL 10 mg/m³, ACGIH (TLV) TWA 5 mg/m³ (highly refined)**Legend** See section 16.**Derived No Effect Level (DNEL)**

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DNEL Worker (Industrial/Professional)

Chemical Name	Short term, systemic effects	Short term, local effects	Long term, systemic effects	Long term, local effects
2,6-di-tert-butylphenol 128-39-2			2.77 mg/kg bw/day Dermal 19.6 mg/m ³ Inhalation	
Amines, C10-14-tert-alkyl ^			12.5 mg/m ³ Inhalation	12.1 mg/m ³ Inhalation
C16-18-(even numbered, saturated and unsaturated)-alkylamines 1213789-63-9		1 mg/m ³ (inhalation)	0.380 mg/m ³ (inhalation)	1 mg/m ³ (inhalation)

DNEL Consumer

Chemical Name	Short term, systemic effects	Short term, local effects	Long term, systemic effects	Long term, local effects
2,6-di-tert-butylphenol 128-39-2			1.67 mg/kg bw/day Oral 5.8 mg/m ³ Inhalation	
Amines, C10-14-tert-alkyl ^			2.5 mg/m ³ Inhalation 0.35 mg/kg bw/day Oral	1.2 mg/m ³ Inhalation
C16-18-(even numbered, saturated and unsaturated)-alkylamines 1213789-63-9			0.040 mg/kg bw/day (oral)	

Predicted No Effect Concentration (PNEC)

Chemical Name	Water	Sediment	Soil	Air	STP	Oral
2,6-di-tert-butylphenol 128-39-2	0.00045 mg/l fw 0.000045 mg/l mw 0.0045 mg/l or	0.196 mg/kg dw fw 0.0196 mg/kg dw mw	0.0389 mg/kg dw		10 mg/l	
Amines, C10-14-tert-alkyl ^	0.001 mg/L fw 0.0001 mg/l mw 0.004 mg/l or	2.14 mg/kg dw fw 0.214 mg/kg dw mw	0.428 mg/kg dw		0.635 mg/l	4.71 mg/kg
C16-18-(even numbered, saturated and unsaturated)-alkylamines 1213789-63-9	0.000026 mg/L mw	3.76 mg/kg sediment dw fw 0.376 mg/kg sediment dw mw	10 mg/kg soil dw		0.550 mg/L	

8.2. Exposure controls**Occupational Exposure Controls****Engineering Measures**

Apply technical measures to comply with the occupational exposure limits. Ensure adequate ventilation, especially in confined areas. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.***

Personal Protective Equipment**General Information**

Protective engineering solutions should be implemented and in use before personal protective equipment is considered. The personal protective equipment (PPE)



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recommendations apply to the product ITSELF. In case of mixtures or formulations, it is suggested that you contact the relevant PPE suppliers.***

Respiratory protection	None under normal use conditions. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Respirator with combination filter for vapour/particulate (EN 14387). Type A/P1. Warning ! filters have a limited use duration. If exposure limits are exceeded a self-contained breathing apparatus has to be worn. The use of breathing apparatus must comply strictly with the manufacturer's instructions and the regulations governing their choices and uses.
Eye Protection	If splashes are likely to occur, wear: Safety glasses with side-shields. EN 166.
Skin and body protection	Wear suitable protective clothing. Protective shoes or boots. Long sleeved clothing. Type 4/6.
Hand Protection	Hydrocarbon-proof gloves. Fluorinated rubber. Nitrile rubber. In case of prolonged contact with the product, it is recommended to wear gloves complying with EN 420 and EN 374 standards, protecting at least for 480 minutes and having a thickness of 0,38 mm at least. These values are indicative only. The level of protection is provided by the material of the glove, its technical characteristics, its resistance to the chemicals to be handled, the appropriateness of its use and its replacement frequency. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Environmental exposure controls

General Information The product should not be allowed to enter drains, water courses or the soil.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance		limpid	
Color		brown	
Physical State @20°C		liquid	
Odor		Characteristic	
Odor Threshold		No information available	
Property	Values	Remarks	Method
pH		Not applicable	
Melting point/range		Not applicable	
Boiling point/boiling range		No information available	
Flash point	256 °C 493 °F		ISO 2592 ISO 2592
Evaporation rate		No information available	
Flammability Limits in Air			
upper		No information available	
Lower		No information available	



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Vapor Pressure		No information available	
Vapor density		No information available	
Relative density	0.897 - 0.907	@ 15 °C	ISO 3675
Density	897 - 907 kg/m ³	@ 15 °C	ISO 3675
Water solubility		Insoluble	
Solubility in other solvents		No information available	
logPow		No information available	
Autoignition temperature		No information available	
Decomposition temperature		No information available	
Viscosity, kinematic	307 - 352 mm ² /s	@ 40 °C	ISO 3104
Explosive properties	Not explosive		
Oxidizing Properties	Not applicable		
Possibility of hazardous reactions	None under normal processing		

9.2. Other information

Freezing Point No information available

Section 10: STABILITY AND REACTIVITY

10.1. Reactivity

General Information None under normal processing.

10.2. Chemical stability

Stability Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous Reactions No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Conditions to avoid Keep away from open flames, hot surfaces and sources of ignition. Keep away from heat and sparks.

10.5. Incompatible materials

Materials to Avoid Strong oxidizing agents.

10.6. Hazardous Decomposition Products

Hazardous Decomposition Products Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. Combustion products include sulphur oxides (SO₂ and SO₃) and Hydrogen sulphide H₂S. Mercaptans. Phosphorous oxides. Nitrogen oxides (NO_x). Silicon dioxide.

Section 11: TOXICOLOGICAL INFORMATION



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11.1. Information on toxicological effectsAcute toxicity Local effects Product Information

Skin contact	. Not classified based on available data. May produce an allergic reaction. High pressure injection of the products under the skin may have very serious consequences even though no symptom or injury may be apparent.
Eye contact	. Not classified based on available data.
Inhalation	. Not classified based on available data. Inhalation of vapors in high concentration may cause irritation of respiratory system.
Ingestion	. Not classified based on available data. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Acute toxicity - Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
2,6-di-tert-butylphenol	> 5000 mg/kg (Rat)	LD50 > 2000 mg/kg (Rabbit)	
Amines, C10-14-tert-alkyl	LD50 500 - 1177 mg/kg (Rat)	LD50 251 mg/kg (Rabbit)	LC50(4h) 157 - 231 ppm (Rat - vapor)
C16-18-(even numbered, saturated and unsaturated)-alkylamines	LD50 1.689 mg/kg (rat - OECD 401)	LD50 2000 mg/kg bw (rat - OECD 402)	

Sensitization

Sensitization	Not classified based on available data. The supplier of one or more of the components contained within this formulation has indicated that he has data on the components and/or similar mixtures, which confirms that at the concentration used, classification is not required. Contains sensitizer(s). May produce an allergic reaction.
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Specific effects

Carcinogenicity	Not classified based on available data.
Mutagenicity	.
Germ Cell Mutagenicity	Not classified based on available data.

Reproductive toxicity	Not classified based on available data.
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Repeated dose toxicityTarget Organ Effects (STOT)

Specific target organ systemic toxicity (single exposure)	Not classified based on available data.
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Specific target organ systemic toxicity (repeated exposure)	Not classified based on available data.
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Aspiration toxicity	Not classified based on available data.
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Other information



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Other adverse effects Characteristic skin lesions (pimples) may develop following prolonged and repeated exposures (contact with contaminated clothing).

Section 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Harmful to aquatic life with long lasting effects.

Acute aquatic toxicity - Product Information

No information available.

Acute aquatic toxicity - Component Information

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Toxicity to microorganisms
2,6-di-tert-butylphenol 128-39-2	EC50 (72h) 1.2 mg/l	EC50 (48h) = 0.45 mg/L Daphnia magna	LC50(96h) 1 mg/l (fish)	
Amines, C10-14-tert-alkyl ^	EC50 (72h) 0.44 mg/l (Algae)	EC50(48h) 0.24 mg/l (Daphnia magna)	LC50 (96h) 1.3 mg/l (Fish)	EC50(30min) 63.5 mg/l
C16-18-(even numbered, saturated and unsaturated)-alkylamines 1213789-63-9	EC50 (72H) > 0.13 mg/l	EC50 (48h): 0.011 mg/l (Daphnia magna)	LC50(96h) 0.11 mg/l (Fathead Minnow - OECD 203) LC50(96h) 0.9 mg/l (Sheepshead Minnow) LC50(96h) 1.3 mg/l (Rainbow Trout)	EC50(3h) 14 - 490.1 mg/L

Chronic aquatic toxicity - Product Information

No information available.

Chronic aquatic toxicity - Component Information

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Toxicity to microorganisms
2,6-di-tert-butylphenol 128-39-2			NOEC (28d) 0.3 mg/l (fish)	
C16-18-(even numbered, saturated and unsaturated)-alkylamines 1213789-63-9		NOEC (21d): 0.013 mg/l (Daphnia magna)		

Effects on terrestrial organisms

No information available.

12.2. Persistence and degradability**General Information**

No information available.

12.3. Bioaccumulative potential



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Product Information No information available.**logPow** No information available**Component Information**

Chemical Name	log Pow
2,6-di-tert-butylphenol - 128-39-2	4.48
Amines, C10-14-tert-alkyl - ^	2.9 @ 23 °C and pH 7

12.4. Mobility in soil**Soil** Given its physical and chemical characteristics, the product generally shows low soil mobility.**Air** Loss by evaporation is limited.**Water** The product is insoluble and floats on water.12.5. Results of PBT and vPvB assessment**PBT and vPvB assessment** No information available.12.6. Other adverse effects**General Information** No information available.

Section 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods**Waste from Residues / Unused Products** Should not be released into the environment. Do not empty into drains. Dispose of in accordance with the European Directives on waste and hazardous waste. Where possible recycling is preferred to disposal or incineration. After use, this oil must be sent to a licensed waste oil facility. Incorrect disposal of used oil poses a risk to the environment. Mixture with other waste types such as solvents, brake- and cooling liquids is forbidden.**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal.*****EWC Waste Disposal No.** According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used. The following Waste Codes are only suggestions: 13 02 05.**Other information** Refer to section 8 for safety and protective measures for disposal personnel.

Section 14: TRANSPORT INFORMATION

ADR/RID Not regulatedIMDG/IMO Not regulated



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ICAO/IATA

Not regulated

ADN

UN/ID No	ID9006
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Hazard class	9
Hazard Labels	none
Description	ID9006, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9 (2,6-di-tert-butylphenol,C16-18-(even numbered, saturated and unsaturated)-alkylamines)
Equipment Requirements	PP

Section 15: REGULATORY INFORMATION

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

European Union

REACH

All substances contained in this mixture have been pre-registered, registered or are exempt from registration in accordance with Regulation (CE) No. 1907/2006 (REACH)

International Inventories

All the substances contained in this product are listed or exempted from listing in the following inventories:
 Canada (DSL/NDSL)
 New Zealand (NZIoC)
 Australia (AICS)
 Europe (EINECS/ELINCS/NLP)
 U.S.A. (TSCA)
 China (IECSC)
 Korea (KECL)
 Philippines (PICCS)***

Further information

No information available

15.2. Chemical Safety Assessment**Chemical Safety Assessment** No information available

Section 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3

H302 - Harmful if swallowed

H304 - May be fatal if swallowed and enters airways

H311 - Toxic in contact with skin



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H314 - Causes severe skin burns and eye damage
 H315 - Causes skin irritation
 H317 - May cause an allergic skin reaction
 H318 - Causes serious eye damage
 H330 - Fatal if inhaled
 H335 - May cause respiratory irritation
 H373 - May cause damage to organs through prolonged or repeated exposure
 H400 - Very toxic to aquatic life
 H410 - Very toxic to aquatic life with long lasting effects
 H412 - Harmful to aquatic life with long lasting effects

Abbreviations, acronyms

ACGIH = American Conference of Governmental Industrial Hygienists

bw = body weight

bw/day = body weight/day

EC x = Effect Concentration associated with x% response

GLP = Good Laboratory Practice

IARC = International Agency for Research of Cancer

LC50 = 50% Lethal concentration - Concentration of a chemical in air or a chemical in water which causes the death of 50% (one half) of a group of test animals

LD50 = 50% Lethal Dose - Chemical amount, given at once, which causes the death of 50% (one half) of a group of test animals

LL = Lethal Loading

NIOSH = National Institute of Occupational Safety and Health

NOAEL = No Observed Adverse Effect Level

NOEC = No Observed Effect Concentration

NOEL = No Observed Effect Level

OECD = Organization for Economic Co-operation and Development

OSHA = Occupational Safety and Health Administration

UVCB = Substance of unknown or Variable composition, Complex reaction products or Biological material

DNEL = Derived No Effect Level

PNEC = Predicted No Effect Concentration

dw = dry weight

fw = fresh water

mw = marine water

or = occasional release

Legend Section 8

TWA: Time Weight Average

STEL: Short Time Exposure Limit

PEL: Permissible exposure limit

REL: Recommended exposure limit

TLV: Threshold Limit Values

+	Sensitizer	*	Skin designation
**	Hazard Designation	C:	Carcinogen
M:	Mutagen	R:	Toxic to reproduction

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Revision Note *** Indicates updated section.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006



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This safety data sheet serves to complete but not to replace the technical product sheets. The information contained herein is given in good faith and is accurate to the best of knowledge at the date indicated above. It is understood by the user that any use of the product for purposes other than those for which it was designed entails potential risk. The information given herein in no way dispenses the user from knowing and applying all provisions regulating his activity. The user bears sole liability for the precautions required when using the product. The regulatory texts indicated herein are intended to aid the user to fulfil his obligations. This list is not to be considered complete and exhaustive. It is the user's responsibility to ensure that he is subject to no other obligations than those mentioned.

End of the Safety Data Sheet

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1. Exposure scenario

Formulation additives, lubricants and greases, Industrial.

Use Descriptor

Sector of use

SU10 - Formulation

SU3 - Industrial Manufacturing (all)

Process category

PROC1 - Use in closed process, no likelihood of exposure

PROC2 - Use in closed, continuous process with occasional controlled exposure

PROC3 - Use in closed batch process (synthesis or formulation)

PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises

PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)

PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

PROC15 - Use as laboratory reagent

Environmental Release Category

ERC2 - Formulation of preparations

Specific Environmental Release Category

ATIEL-ATC SpERC 2.Ai-I.v1.

Processes, tasks, activities covered

Industrial formulation of lubricant additives, lubricants and greases. Includes material transfers, mixing, large and small scale packing, sampling, maintenance.

2. Operational conditions and risk management measures

2.1. Control of environmental exposure

Amounts used

Production volume in EU (tons/year) : 1.00E+04

Fraction of EU tonnage used in region: 0.1

Fraction of Regional tonnage used locally: 0.1

Frequency and duration of use

Emission Days (days/year): 300

Environment factors not influenced by risk management

Local freshwater dilution factor: 10

Local marine water dilution factor: 100

Other operational conditions of use affecting environmental exposure

Negligible wastewater emissions as process operates without water contact.

Release fraction to air from process (after typical onsite RMMs): 5.00E-05

Release fraction to wastewater from process (after typical onsite RMMs and before (municipal) sewage treatment plant): 1.10E-12

Release fraction to soil from process (after typical onsite RMMs): 0

Technical conditions and measures at process level to prevent release

Common practices vary across sites thus conservative process release estimates used.

Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil

Prevent discharge of undissolved substance to or recover from onsite wastewater

User sites are assumed to be provided with oil/water separators and for waste water to be discharged via public sewer system

Treat air emission to provide a typical removal efficiency of (%): 70

Organizational measures to prevent/limit release from the site

Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.

Conditions and measures related to municipal sewage treatment plant

Estimated substance removal from wastewater via domestic sewage treatment (%): 0.10

Maximum allowable site tonnage (MSafe) based on release following total wastewater treatment removal (kg/d): 958 781

Assumed domestic sewage treatment plant flow (m3/d): 2.00E+03

Conditions and measures related to external treatment of waste for disposal

External treatment and disposal of waste should comply with applicable local and/or national regulations.

Conditions and measures related to external recovery of waste

External recovery and recycling of waste should comply with applicable local and/or national regulations.

2.2. Control of exposure - Workers / Consumers

Product characteristics

2.2a. Control of worker exposure

Contributing Scenarios	Operational conditions and risk management measures

Remarks

No exposure assessment presented for human health.

2.2b. Control of consumer exposure

Product Category(ies)	Operational conditions and risk management measures

Remarks

Not applicable.

3. Exposure estimation and references

Health

The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product

Environment

Used ECETOC TRA model.

4. Guidance for Downstream User to check compliance with the Exposure scenario

Health

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Environment

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SpERC factsheet (<http://cefic.org/en/reach-for-industries-libraries.html>). If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

General

For further information see www.atiel.org/reach/introduction

LUBGES-BI-33528

1. Exposure scenario

General use of lubricants and greases in vehicles or machinery. Industrial.

Use Descriptor

Sector of use

SU3 - Industrial Manufacturing (all)

Process category

PROC1 - Use in closed process, no likelihood of exposure

PROC2 - Use in closed, continuous process with occasional controlled exposure

PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

Environmental Release Category

ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles

ERC7 - Industrial use of substances in closed systems

Specific Environmental Release Category

ATIEL-ATC SpERC 4.Bi.v1.

Processes, tasks, activities covered

Covers general use of lubricants and greases in vehicles or machinery in closed systems. Includes filling and draining of containers and operation of enclosed machinery (including engines) and associated maintenance and storage activities.

2. Operational conditions and risk management measures

2.1. Control of environmental exposure

Amounts used

Production volume in EU (tons/year) : 2.63E+03

Fraction of EU tonnage used in region: 0.1

Fraction of Regional tonnage used locally: 0.1

Frequency and duration of use

Emission Days (days/year): 300

Environment factors not influenced by risk management

Local freshwater dilution factor: 10

Local marine water dilution factor: 100

Other operational conditions of use affecting environmental exposure

Negligible wastewater emissions as process operates without water contact.

Release fraction to air from process (after typical onsite RMMs): 5.00E-05

Release fraction to wastewater from process (after typical onsite RMMs and before (municipal) sewage treatment plant): 1.10E-12

Release fraction to soil from process (after typical onsite RMMs): 0

Technical conditions and measures at process level to prevent release

Common practices vary across sites thus conservative process release estimates used.

Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil

Prevent discharge of undissolved substance to or recover from onsite wastewater

User sites are assumed to be provided with oil/water separators and for waste water to be discharged via public sewer system

Organizational measures to prevent/limit release from the site

Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.

Conditions and measures related to municipal sewage treatment plant

Estimated substance removal from wastewater via domestic sewage treatment (%): 0.10

Maximum allowable site tonnage (MSafe) based on release following total wastewater treatment removal (kg/d): 252 272

Assumed domestic sewage treatment plant flow (m3/d): 2.00E+03

Conditions and measures related to external treatment of waste for disposal

External treatment and disposal of waste should comply with applicable local and/or national regulations.

Conditions and measures related to external recovery of waste

External recovery and recycling of waste should comply with applicable local and/or national regulations.

2.2. Control of exposure - Workers / Consumers

Product characteristics

2.2a. Control of worker exposure

Contributing Scenarios	Operational conditions and risk management measures

Remarks

No exposure assessment presented for human health.

2.2b. Control of consumer exposure

Product Category(ies)	Operational conditions and risk management measures

Remarks

Not applicable.

3. Exposure estimation and references

Health

The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product

Environment

Used ECETOC TRA model.

4. Guidance for Downstream User to check compliance with the Exposure scenario

Health

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Environment

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SpERC factsheet (<http://cefic.org/en/reach-for-industries-libraries.html>). If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

General

For further information see www.atiel.org/reach/introduction

LUBGES-BP-33528

1. Exposure scenario

General use of lubricants and greases in vehicles or machinery. Professional.

Use Descriptor

Sector of use

SU22 - Professional uses

Process category

PROC1 - Use in closed process, no likelihood of exposure

PROC2 - Use in closed, continuous process with occasional controlled exposure

PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

PROC20 - Heat and pressure transfer fluids in dispersive, professional use but closed systems

Environmental Release Category

ERC9a - Wide dispersive indoor use of substances in closed systems

ERC9b - Wide dispersive outdoor use of substances in closed systems

Specific Environmental Release Category

ATIEL-ATC SpERC 9.Bp.v1.

Processes, tasks, activities covered

Covers general use of lubricants and greases in vehicles or machinery in closed systems. Includes filling and draining of containers and operation of enclosed machinery (including engines) and associated maintenance and storage activities.

2. Operational conditions and risk management measures

2.1. Control of environmental exposure

Amounts used

Production volume in EU (tons/year) : 5.39E+03

Fraction of EU tonnage used in region: 0.1

Fraction of Regional tonnage used locally: 0.1

Frequency and duration of use

Emission Days (days/year): 365

Environment factors not influenced by risk management

Local freshwater dilution factor: 10

Local marine water dilution factor: 100

Other operational conditions of use affecting environmental exposure

Negligible wastewater emissions as process operates without water contact.

Release fraction to air from process (after typical onsite RMMs): 5.00E-04

Release fraction to wastewater from process (after typical onsite RMMs and before (municipal) sewage treatment plant): 5.00E-04

Release fraction to soil from process (after typical onsite RMMs): 1.00E-03

Technical conditions and measures at process level to prevent release

Common practices vary across sites thus conservative process release estimates used.

Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil

Prevent discharge of undissolved substance to or recover from onsite wastewater

Organizational measures to prevent/limit release from the site

Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.

Conditions and measures related to municipal sewage treatment plant

Estimated substance removal from wastewater via domestic sewage treatment (%): 0.10

Maximum allowable site tonnage (MSafe) based on release following total wastewater treatment removal (kg/d): 2 545

Assumed domestic sewage treatment plant flow (m3/d): 2.00E+03

Conditions and measures related to external treatment of waste for disposal

External treatment and disposal of waste should comply with applicable local and/or national regulations.

Conditions and measures related to external recovery of waste

External recovery and recycling of waste should comply with applicable local and/or national regulations.

2.2. Control of exposure - Workers / Consumers

Product characteristics

2.2a. Control of worker exposure

Contributing Scenarios	Operational conditions and risk management measures

Remarks

No exposure assessment presented for human health.

2.2b. Control of consumer exposure

Product Category(ies)	Operational conditions and risk management measures

Remarks

Not applicable.

3. Exposure estimation and references

Health

The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product

Environment

Used ECETOC TRA model.

4. Guidance for Downstream User to check compliance with the Exposure scenario

Health

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Environment

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SpERC factsheet (<http://cefic.org/en/reach-for-industries-libraries.html>). If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

General

For further information see www.atiel.org/reach/introduction

LUBGES-CI-33528

1. Exposure scenario

Use of lubricants and greases in open systems. Industrial.

Use Descriptor

Sector of use

SU3 - Industrial Manufacturing (all)

Process category

PROC1 - Use in closed process, no likelihood of exposure

PROC2 - Use in closed, continuous process with occasional controlled exposure

PROC7 - Industrial spraying

PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities

PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

PROC10 - Roller application or brushing

PROC13 - Treatment of articles by dipping and pouring

Environmental Release Category

ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles

Specific Environmental Release Category

ATIEL-ATC SpERC 4.Ci.v1.

Processes, tasks, activities covered

Covers use of lubricants and greases in open systems, including application of lubricant to work pieces or equipment by dipping, brushing or spraying (without exposure to heat), e.g. mold releases, corrosion protection, slideways. Includes associated product storage, material transfers, sampling and maintenance activities.

2. Operational conditions and risk management measures

2.1. Control of environmental exposure

Amounts used

Production volume in EU (tons/year) : 3.81E+02

Fraction of EU tonnage used in region: 0.1

Fraction of Regional tonnage used locally: 0.1

Frequency and duration of use

Emission Days (days/year): 300

Environment factors not influenced by risk management

Local freshwater dilution factor: 10

Local marine water dilution factor: 100

Other operational conditions of use affecting environmental exposure

Negligible wastewater emissions as process operates without water contact.

Release fraction to air from process (after typical onsite RMMs): 5.00E-05

Release fraction to wastewater from process (after typical onsite RMMs and before (municipal) sewage treatment plant): 1.10E-12

Release fraction to soil from process (after typical onsite RMMs): 0

Technical conditions and measures at process level to prevent release

Common practices vary across sites thus conservative process release estimates used.

Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil

Prevent discharge of undissolved substance to or recover from onsite wastewater

User sites are assumed to be provided with oil/water separators and for waste water to be discharged via public sewer system

Treat air emission to provide a typical removal efficiency of (%): 70

Organizational measures to prevent/limit release from the site

Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.

Conditions and measures related to municipal sewage treatment plant

Estimated substance removal from wastewater via domestic sewage treatment (%): 0.10

Maximum allowable site tonnage (MSafe) based on release following total wastewater treatment removal (kg/d): 25 556

Assumed domestic sewage treatment plant flow (m³/d): 2.00E+03

Conditions and measures related to external treatment of waste for disposal

External treatment and disposal of waste should comply with applicable local and/or national regulations.

Conditions and measures related to external recovery of waste

External recovery and recycling of waste should comply with applicable local and/or national regulations.

2.2. Control of exposure - Workers / Consumers

Product characteristics

2.2a. Control of worker exposure

Contributing Scenarios	Operational conditions and risk management measures
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Remarks

No exposure assessment presented for human health.

2.2b. Control of consumer exposure

Product Category(ies)	Operational conditions and risk management measures
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Remarks

Not applicable.

3. Exposure estimation and references

Health

The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product

Environment

Used ECETOC TRA model.

4. Guidance for Downstream User to check compliance with the Exposure scenario

Health

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Environment

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Further details on scaling and control technologies are provided in SpERC factsheet

(<http://cefic.org/en/reach-for-industries-libraries.html>).

If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

General

For further information see www.atiel.org/reach/introduction

LUBGES-CP-33528

1. Exposure scenario

Use of lubricants and greases in open systems. Professional.

Use Descriptor

Sector of use

SU22 - Professional uses

Process category

PROC1 - Use in closed process, no likelihood of exposure

PROC2 - Use in closed, continuous process with occasional controlled exposure

PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

PROC10 - Roller application or brushing

PROC11 - Non industrial spraying

PROC13 - Treatment of articles by dipping and pouring

Environmental Release Category

ERC8a - Wide dispersive indoor use of processing aids in open systems

ERC8d - Wide dispersive outdoor use of processing aids in open systems

Specific Environmental Release Category

ATIEL-ATC SpERC 8.Cp.v1.

Processes, tasks, activities covered

Covers use of lubricants and greases in open systems, including application of lubricant to work pieces or equipment by dipping, brushing or spraying (without exposure to heat), e.g. mold releases, corrosion protection, slideways. Includes associated product storage, material transfers, sampling and maintenance activities.

2. Operational conditions and risk management measures

2.1. Control of environmental exposure

Amounts used

Production volume in EU (tons/year) : 2.24E+02

Fraction of EU tonnage used in region: 0.1

Fraction of Regional tonnage used locally: 0.1

Frequency and duration of use

Emission Days (days/year): 365

Environment factors not influenced by risk management

Local freshwater dilution factor: 10

Local marine water dilution factor: 100

Other operational conditions of use affecting environmental exposure

Negligible wastewater emissions as process operates without water contact.

Release fraction to air from process (after typical onsite RMMs): 5.00E-04

Release fraction to wastewater from process (after typical onsite RMMs and before (municipal) sewage treatment plant): 5.00E-04

Release fraction to soil from process (after typical onsite RMMs): 1.00E-03

Technical conditions and measures at process level to prevent release

Common practices vary across sites thus conservative process release estimates used.

Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil

Prevent discharge of undissolved substance to or recover from onsite wastewater

Organizational measures to prevent/limit release from the site

Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.

Conditions and measures related to municipal sewage treatment plant

Estimated substance removal from wastewater via domestic sewage treatment (%): 0.10

Maximum allowable site tonnage (MSafe) based on release following total wastewater treatment removal (kg/d): 229

Assumed domestic sewage treatment plant flow (m³/d): 2.00E+03

Conditions and measures related to external treatment of waste for disposal

External treatment and disposal of waste should comply with applicable local and/or national regulations.

Conditions and measures related to external recovery of waste

External recovery and recycling of waste should comply with applicable local and/or national regulations.

2.2. Control of exposure - Workers / Consumers

Product characteristics

2.2a. Control of worker exposure

Contributing Scenarios	Operational conditions and risk management measures

Remarks

No exposure assessment presented for human health.

2.2b. Control of consumer exposure

Product Category(ies)	Operational conditions and risk management measures

Remarks

Not applicable.

3. Exposure estimation and references

Health

The risk Management Measures/Operational Conditions that are identified in the Exposure Scenario are the outcome of a quantitative and qualitative assessment that covers this product

Environment

Used ECETOC TRA model.

4. Guidance for Downstream User to check compliance with the Exposure scenario

Health

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Environment

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures.

Further details on scaling and control technologies are provided in SpERC factsheet (<http://cefic.org/en/reach-for-industries-libraries.html>).

If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required.

General

For further information see www.atiel.org/reach/introduction