



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

### 1.1 Product identifier

<b>Product name</b>	<b>Tribol GR 100-0 PD</b>
<b>UFI:</b>	VQK2-X0K6-6009-M7SW
<b>Product code</b>	468681-DE03
<b>SDS #</b>	468681
<b>Product type</b>	Grease

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

Identified uses
General use of lubricants and greases in vehicles or machinery-Industrial General use of lubricants and greases in vehicles or machinery-Professional

<b>Use of the substance/ mixture</b>	Grease for industrial applications. 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

<b>Supplier</b>	Castrol Holdings Europe B.V., d'Arcyweg 76, 3198NA Europoort Rotterdam
	Castrol Germany GmbH, Überseeallee 1, 20457 Hamburg
	+49 (0) 800 863 73 70
<b>E-mail address</b>	MSDSadvice@bp.com

### 1.4 Emergency telephone number


<b>EMERGENCY TELEPHONE NUMBER</b>	Carechem: +44 (0) 1235 239 670 (24/7)
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## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

<b>Product definition</b>	Mixture
<b>Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]</b>	Skin Sens. 1, H317 Aquatic Chronic 3, H412
	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

<b>UFI:</b>	VQK2-X0K6-6009-M7SW
<b>Hazard pictograms</b>	
<b>Signal word</b>	Warning
<b>Hazard statements</b>	H317 - May cause an allergic skin reaction. H412 - Harmful to aquatic life with long lasting effects.
<b>Precautionary statements</b>	

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## SECTION 2: Hazards identification

<b>Prevention</b>	P280 - Wear protective gloves. P273 - Avoid release to the environment. P261 - Avoid breathing dust.
<b>Response</b>	P362 + P364 - Take off contaminated clothing and wash it before reuse. P302 + P352 - IF ON SKIN: Wash with plenty of soap and water. P333 + P313 - If skin irritation or rash occurs: Get medical attention.
<b>Storage</b>	Not applicable.
<b>Disposal</b>	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Hazardous ingredients</b>	Reaction product of ammonium molybdate and C12-C24-diethoxylated alkylamine (1:5-1:3) Reaction products of triphenyl phosphite and isodecanol (1:1) 2,6-di-tert-butyl-4-nonylphenol
<b>Supplemental label elements</b>	Not applicable.

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

<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	Not applicable.
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### Special packaging requirements

<b>Containers to be fitted with child-resistant fastenings</b>	Not applicable.
<b>Tactile warning of danger</b>	Not 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.

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

**Other hazards which do not result in classification** Defatting to the skin.  
Note: High Pressure Applications  
Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency.  
See 'Notes to physician' under First-Aid Measures, Section 4 of this Safety Data Sheet.  
Experimental data on one or more of the components has been used to determine all or part of the hazard classification of this product.  
None known.  
Experimental data on one or more of the components has been used to determine all or part of the hazard classification of this product.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

**Product definition** Mixture  
Highly refined mineral oil and additives. Thickening agent.

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Reaction product of ammonium molybdate and C12-C24-diethoxylated alkylamine (1:5-1:3)	REACH #: 01-0000016000-92 EC: 412-780-3 Index: 042-004-00-5	≤3	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	-	[1]
Reaction products of triphenyl phosphite and isodecanol (1:1)	REACH #: 01-2119968254-31 EC: 701-341-4 CAS: -	<1	Skin Sens. 1, H317 STOT RE 2, H373 Aquatic Chronic 2, H411	-	[1]
2,6-di-tert-butyl-4-nonylphenol	REACH #: 01-2120759723-46 EC: 224-320-7 CAS: 4306-88-1	<1	Skin Sens. 1B, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M [Acute] = 1 M [Chronic] = 1	[1]

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## SECTION 3: Composition/information on ingredients

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

### Type

[1] Substance classified with a health or environmental hazard

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

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

<b>Eye contact</b>	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.
<b>Skin contact</b>	Wash skin thoroughly with soap and water or use recognised skin cleanser. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. In the event of any complaints or symptoms, avoid further exposure. Get medical attention.
<b>Inhalation</b>	If inhaled, remove to fresh air. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. Get medical attention if symptoms occur.
<b>Ingestion</b>	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 symptoms occur.
<b>Protection of first-aiders</b>	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

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

#### Potential acute health effects

<b>Inhalation</b>	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
<b>Ingestion</b>	No known significant effects or critical hazards.
<b>Skin contact</b>	Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction.
<b>Eye contact</b>	No known significant effects or critical hazards.

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

<b>Inhalation</b>	Inhalation of oil mist or vapours at elevated temperatures may cause respiratory irritation.
<b>Ingestion</b>	Ingestion of large quantities may cause nausea and diarrhoea.
<b>Eye contact</b>	Potential risk of transient stinging or redness if accidental eye contact occurs.

### 4.3 Indication of any immediate medical attention and special treatment needed

<b>Notes to physician</b>	Treatment should in general be symptomatic and directed to relieving any effects. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. Note: High Pressure Applications Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency. Injuries may not appear serious at first but within a few hours tissue becomes swollen, discoloured and extremely painful with extensive subcutaneous necrosis. Surgical exploration should be undertaken without delay. Thorough and extensive debridement of the wound and underlying tissue is necessary to minimise tissue loss and prevent or limit permanent damage. Note that high pressure may force the product considerable distances along tissue planes.
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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

<b>Suitable extinguishing media</b>	Use foam or all-purpose dry chemical to extinguish.
<b>Unsuitable extinguishing media</b>	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

<b>Hazards from the substance or mixture</b>	No specific fire or explosion hazard.
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## SECTION 5: Firefighting measures

**Hazardous combustion products** Combustion products may include the following:  
 carbon oxides (CO, CO<sub>2</sub>) (carbon monoxide, carbon dioxide)  
 metal oxide/oxides  
 nitrogen oxides (NO, NO<sub>2</sub> etc.)  
 sulphur oxides (SO, SO<sub>2</sub>, etc.)

### 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. This material is harmful to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**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. Provide adequate ventilation. Put on appropriate personal protective equipment.

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

### 6.2 Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

### 6.3 Methods and material for containment and cleaning up

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

**Large spill** Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labelled waste container. Avoid creating dusty conditions and prevent wind dispersal. If emergency personnel are unavailable, contain spilt material. Suction or scoop the spill into appropriate disposal or recycling vessels, then cover spill area with oil absorbent. 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

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).

### 7.1 Precautions for safe handling

**Protective measures** Put on appropriate personal protective equipment. 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 contact of spilt material and runoff with soil and surface waterways. 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.

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## SECTION 7: Handling and storage

### 7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). 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. Use appropriate containment to avoid environmental contamination.

Not suitable

Prolonged exposure to elevated temperature

Germany - Storage code

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### 7.3 Specific end use(s)

#### Recommendations

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

## SECTION 8: Exposure controls/personal protection

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).

### 8.1 Control parameters

#### Occupational exposure limits

No exposure limit value known.

#### Recommended monitoring procedures

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

#### Biological exposure indices

#### Product/ingredient name

#### Exposure indices

No exposure indices known.

#### Derived No Effect Level

No DNELs/DMELs available.

#### Predicted No Effect Concentration

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

##### Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. For protection against metal working fluids, respiratory protection that is classified as "resistant to oil" (class R) or oil proof (class P) should be selected where appropriate. Depending on the level of airborne contaminants, an air-purifying, half-mask respirator (with HEPA filter) including disposable (P- or R-series) (for oil mists less than 50mg/m<sup>3</sup>), or any powered, air-purifying respirator equipped with hood or helmet and HEPA filter (for oil mists less than 125 mg/m<sup>3</sup>). Where organic vapours are a potential hazard during metalworking operations, a combination particulate and organic vapour filter may be necessary. 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

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**SECTION 8: Exposure controls/personal protection**

- Eye/face protection
- Skin protection
- Hand protection

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.

Safety glasses with side shields.

**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: Nitrile 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 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

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**SECTION 8: Exposure controls/personal protection**

**Refer to standards:**

risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.

- 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**

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

**9.1 Information on basic physical and chemical properties**

**Appearance**

- Physical state** Grease
- Colour** Brown. [Light]
- Odour** Not available.
- Odour threshold** Not available.
- pH** Not applicable.
- Melting point/freezing point** Not available.
- Initial boiling point and boiling range** Not available.
- Drop Point** 194 °C
- Flash point** Closed cup: 222°C (431.6°F) [Estimated. Based on Lubricants - Base Oils]
- Evaporation rate** Not available.
- Flammability (solid, gas)** Not available.
- Lower and upper explosion limit** Not applicable.
- Vapour pressure** Not available.

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method

- Relative vapour density** Not applicable.
- Relative density** Not available.
- Density** <1000 kg/m³ (<1 g/cm³) at 20°C
- Solubility(ies)**

Media	Result
water	Not soluble

- Partition coefficient: n-octanol/water** Not applicable.
- Auto-ignition temperature** Not applicable.
- Decomposition temperature** Not available.
- Viscosity** Not available.
- Penetration Number (0.1 mm)** >355 at 25°C
- Explosive properties** Not available.
- Oxidising properties** Not available.

**Particle characteristics**

- Median particle size** Not available.

**9.2 Other information**

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**SECTION 9: Physical and chemical properties**

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 all possible sources of ignition (spark or flame).
- 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 hazard classes as defined in Regulation (EC) No 1272/2008**

Acute toxicity

Product/ingredient name	Result / Route	Test authority / Number	Species	Dose	Exposure	Remarks
Reaction product of ammonium molybdate and C12-C24-diethoxylated alkylamine (1:5-1:3)	LD50 Dermal	OECD 402	Rat	>2000 mg/kg	-	-
	LD50 Oral	OECD 401	Rat	>2000 mg/kg	-	-
isodecyl diphenyl phosphite	LC50 Dermal	OECD 402	Rabbit	>5000 mg/kg	-	-
	LC50 Oral	OECD 401	Rat	3840 mg/kg	-	-
	LC50 Inhalation Vapour	OECD 403	Rat	>8.4 mg/l	4 hours	-
2,6-di-tert-butyl-4-nonylphenol	LD50 Dermal	OECD 402	Rat	>2000 mg/kg	-	-
	LD50 Oral	OECD 401	Rat	>2000 mg/kg	-	-

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
isodecyl diphenyl phosphite	2500	N/A	N/A	N/A	N/A

Irritation/Corrosion

Product/ingredient name	Test authority / Test number	Species	Route / Result	Test concentration	Remarks
Reaction product of ammonium molybdate and C12-C24-diethoxylated alkylamine (1:5-1:3)	OECD 405	Rabbit	Eyes - Redness of the conjunctivae	-	-
	OECD 404	Rabbit	Skin - Moderate irritant	-	-
isodecyl diphenyl phosphite	ASTM -	Rabbit	Eyes - Slightly irritating to the eyes.	-	-



**SECTION 11: Toxicological information**

	OECD	404	Rabbit	Skin - Slightly irritating to the skin.	-	-
2,6-di-tert-butyl-4-nonylphenol	OECD	405	Rabbit	Eyes - Slightly irritating to the eyes.	-	-
	OECD	404	Rabbit	Skin - Mild irritant	-	-

**Sensitiser**

Product/ingredient name	Route	Test authority / Test number	Species	Result	Remarks
Reaction product of ammonium molybdate and C12-C24-diethoxylated alkylamine (1:5-1:3)	skin	OECD 406	Guinea pig	Sensitising	-
isodecyl diphenyl phosphite	skin	OECD 406	Guinea pig	Sensitising	-
2,6-di-tert-butyl-4-nonylphenol	skin	OECD 429	Mouse	Sensitising	-

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Product/ingredient name	Test authority / Test number	Cell	Type	Result	Remarks
isodecyl diphenyl phosphite	OECD 471	-	Experiment: In vitro Subject: Bacteria	Negative	-
	OECD 487	-	Experiment: In vitro Subject: Mammalian-Animal	Negative	Based on studies with similar substances.
	OECD 474	-	Experiment: In vivo Subject: Mammalian-Animal	Negative	Based on studies with similar substances.
2,6-di-tert-butyl-4-nonylphenol	OECD 471	-	Experiment: In vitro Subject: Bacteria	Negative	-
	OECD 487	-	Experiment: In vitro Subject: Mammalian-Animal	Negative	-
	OECD 4776	-	Experiment: In vitro Subject: Mammalian-Animal	Negative	-

**Reproductive toxicity**

Product/ingredient name	Test authority / Test number	Species	Route	Exposure	Developmental	Maternal toxicity	Fertility	Remarks
isodecyl diphenyl phosphite	OECD 422	Rat	Oral	-	Negative	Negative	Negative	Based on studies with similar substances.
2,6-di-tert-butyl-4-nonylphenol	OECD 422	Rat	Oral	-	-	Positive	Negative	-

**Information on likely routes of exposure**

Routes of entry anticipated: Dermal, Inhalation, Eyes.

**Potential acute health effects**

- Inhalation** Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Ingestion** No known significant effects or critical hazards.
- Skin contact** Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction.
- Eye contact** No known significant effects or critical hazards.

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

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## SECTION 11: Toxicological information

<b>Inhalation</b>	No specific data.
<b>Ingestion</b>	No specific data.
<b>Skin contact</b>	Adverse symptoms may include the following: irritation redness dryness cracking
<b>Eye contact</b>	No specific data.
<b><u>Delayed and immediate effects as well as chronic effects from short and long-term exposure</u></b>	
<b>Inhalation</b>	Inhalation of oil mist or vapours at elevated temperatures may cause respiratory irritation.
<b>Ingestion</b>	Ingestion of large quantities may cause nausea and diarrhoea.
<b>Eye contact</b>	Potential risk of transient stinging or redness if accidental eye contact occurs.
<b><u>Potential chronic health effects</u></b>	
<b>General</b>	No known significant effects or critical hazards.
<b>Carcinogenicity</b>	No known significant effects or critical hazards.
<b>Mutagenicity</b>	No known significant effects or critical hazards.
<b>Developmental effects</b>	No known significant effects or critical hazards.
<b>Fertility effects</b>	No known significant effects or critical hazards.

### 11.2 Information on other hazards

#### 11.2.1 Endocrine disrupting properties

Not available.

**Remarks - Endocrine disruptor - Health** Not available.

#### 11.2.2 Other information

Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

Product/ingredient name	Test authority / Test number	Species	Type / Result	Exposure	Effects	Remarks
Reaction product of ammonium molybdate and C12-C24-diethoxylated alkylamine (1:5-1:3)	-	Daphnia	Chronic EC50 6.8 mg/l	48 hours	-	-
isodecyl diphenyl phosphite	OECD 201	Algae	Acute EC50 1.6 mg/l	72 hours	-	-
	OECD 202	Daphnia	Acute EC50 1 to 5 mg/l	48 hours	-	-
	OECD 209	Micro-organism	Acute EC50 >100 mg/l	3 hours	-	-
	OECD 203	Fish	Acute LC50 >16 mg/l	96 hours	-	-
2,6-di-tert-butyl-4-nonylphenol	OECD 202	Daphnia	Acute EC50 0.124 mg/l	48 hours	-	-
	OECD 209	Micro-organism	Acute EC50 >1000 mg/l	3 hours	-	-
	OECD 201	Algae	Acute ErC50 >100 mg/l	72 hours	-	-
	OECD 203	Fish	Acute LC50 >10 mg/l	96 hours	-	-
	OECD 201	Algae	Chronic EC10 100 mg/l	72 hours	-	-

**Environmental hazards** Harmful to aquatic life with long lasting effects.  
Based on data available for this or related materials.

### 12.2 Persistence and degradability

Expected to be biodegradable.

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## SECTION 12: Ecological information

Product/ingredient name	Test authority / Test number	Result - Exposure	Remarks
isodecyl diphenyl phosphite	-	17 % - 28 days	Not readily biodegradable.
2,6-di-tert-butyl-4-nonylphenol	OECD 302C	31 % - 28 days	-

### 12.3 Bioaccumulative potential

Not available.

### 12.4 Mobility in soil

<b>Soil/water partition coefficient (K<sub>oc</sub>)</b>	Not available.
<b>Mobility</b>	Non-volatile. Grease. insoluble in water.

### 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.

<b>12.6 Endocrine disrupting properties</b>	Not available.
<b>Remarks - Endocrine disruptor - Environment</b>	Not available.
<b>12.7 Other adverse effects</b>	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

<b>Methods of disposal</b>	Where possible, arrange for product to be recycled. Dispose of via an authorised person/ licensed waste disposal contractor in accordance with local regulations.
<b>Hazardous waste</b>	Yes.
<b>European waste catalogue (EWC)</b>	

Waste code	Waste designation
12 01 12*	spent waxes and fats

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

<b>Methods of disposal</b>	Where possible, arrange for product to be recycled. Dispose of via an authorised person/ licensed waste disposal contractor in accordance with local regulations.
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Waste code	European waste catalogue (EWC)
15 01 10*	packaging containing residues of or contaminated by hazardous substances

<b>Special precautions</b>	This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.
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<b>References</b>	Commission 2014/955/EU Directive 2008/98/EC
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## SECTION 14: Transport information

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

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	<b>(Germany)</b>	

<b>SECTION 14: Transport information</b>				
<b>14.4 Packing group</b>	-	-	-	-
<b>14.5 Environmental hazards</b>	No.	No.	No.	No.
<b>Additional information</b>	-	-	-	-

**14.6 Special precautions for user** Not available.

**14.7 Maritime transport in bulk according to IMO instruments** Not available.

<b>SECTION 15: Regulatory information</b>
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**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.

[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.

[Other regulations](#)

**REACH Status**

The company, as identified in Section 1, sells this product in the EU in compliance with the current requirements of REACH.

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

All components are active or exempted.

**Australia inventory (AIRC)**

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.

**China inventory (IECSC)**

All components are listed or exempted.

**Japan inventory (CSCL)**

At least one component is not listed.

**Korea inventory (KECI)**

At least one component is not listed.

**Philippines inventory (PICCS)**

At least one component is not listed.

**Taiwan Chemical Substances Inventory (TCSI)**

All components are listed or exempted.

[Ozone depleting substances \(1005/2009/EU\)](#)

Not listed.

[Prior Informed Consent \(PIC\) \(649/2012/EU\)](#)

Not listed.

[Persistent Organic Pollutants](#)

Not listed.

[EU - Water framework directive - Priority substances](#)

None of the components are listed.

[Seveso Directive](#)

This product is not controlled under the Seveso Directive.

[National regulations](#)

[Hazardous incident ordinance](#)

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**SECTION 15: Regulatory information**

<b>Hazard class for water</b>	1 (classified according AwSV)
<b>Prohibited Chemicals Regulation (ChemVerbotsV)</b>	When placed on the market in Germany, this product is not subject to the Prohibited Chemicals Regulation (ChemVerbotsV).
<b>Occupational restrictions</b>	Observe employment restrictions in the following: Gesetz zum Schutz der arbeitenden Jugend (Jugendarbeitsschutzgesetz – JArbSchG) Gesetz zum Schutz von Müttern bei der Arbeit, in der Ausbildung und im Studium (Mutterschutzgesetz – MuSchG)

**15.2 Chemical safety assessment**

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

**SECTION 16: Other information**

<b>Abbreviations and acronyms</b>	<p>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 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, 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, 64742-65-0 / RRN 01-2119471299-27, 64742-70-7 / RRN 01-2119487080-42, 72623-85-9 / RRN 01-2119555262-43, 72623-86-0 / RRN 01-2119474878-16, 72623-87-1 / RRN 01-2119474889-13</p>
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**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Classification	Justification
Skin Sens. 1, H317 Aquatic Chronic 3, H412	Calculation method Calculation method

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**SECTION 16: Other information**

<b>Full text of abbreviated H statements</b>	H315	Causes skin irritation.	
	H317	May cause an allergic skin reaction.	
	H319	Causes serious eye 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.	
	H411	Toxic to aquatic life with long lasting effects.	
	<b>Full text of classifications [CLP/GHS]</b>	Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
		Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
		Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
		Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Skin Irrit. 2		SKIN CORROSION/IRRITATION - Category 2	
Skin Sens. 1		SKIN SENSITISATION - Category 1	
Skin Sens. 1B	SKIN SENSITISATION - Category 1B		
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2		

**History**

<b>Date of issue/ Date of revision</b>	23/02/2023.
<b>Date of previous issue</b>	22/02/2023.
<b>Prepared by</b>	Product Stewardship

 **Indicates information that has changed from previously issued version.**

**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.

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## Annex to the extended Safety Data Sheet (eSDS)

Professional

### Identification of the substance or mixture

Product definition	Mixture
Code	468681-DE03
Product name	Tribol GR 100-0 PD

### Section 1: Title

**Short title of the exposure scenario** General use of lubricants and greases in vehicles or machinery - Professional

**List of use descriptors**

**Identified use name:** General use of lubricants and greases in vehicles or machinery-Professional  
**Process Category:** PROC01, PROC02, PROC08a, PROC08b, PROC20  
**Sector of end use:** SU22  
**Subsequent service life relevant for that use:** No.  
**Environmental Release Category:** ERC09a, ERC09b  
**Specific Environmental Release Category:** ESVOC SpERC 9.6b.v1

**Processes and activities covered by the exposure scenario** 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.

### Section 2 Operational conditions and risk management measures

#### Section 2.1 Control of worker exposure

##### Product characteristics:

**Physical state:** Liquid, vapour pressure < 0.5 kPa

**Concentration of substance in product:** Covers use of substance/product up to 100 % (unless stated differently)

**Frequency and duration of use:** Covers daily exposures up to 8 hours

**Other conditions affecting workers exposure:** Assumes use at not more than 20°C above ambient temperature. Assumes a good basic standard of occupational hygiene is implemented

#### Contributing scenarios: Operational conditions and risk management measures

General measures applicable to all activities:  
Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop. Use suitable eye protection. Avoid direct eye contact with product also via contamination on hands.

Operation of equipment containing engine oils and similar Use in contained systems:  
No other specific measures identified.

Material transfers Non-dedicated facility:  
Avoid carrying out activities involving exposure for more than 4 hours per day. Wear chemical-resistant gloves (tested to EN374) in combination with specific activity training.

Equipment cleaning and maintenance Dedicated facility:  
Drain down system prior to equipment break-in or maintenance. Retain drain-downs in sealed storage pending disposal or for subsequent recycle.

Storage:  
Store substance within a closed system.

## Section 2.2: Control of environmental exposure

### Amounts used:

EU tonnage of risk determining substance per year: 5.39 Tonnes/year

### Frequency and duration of use:

Emission days 365

### Environment factors not influenced by risk management:

Local freshwater dilution factor 10

Local marine water dilution factor 100

### Other conditions affecting environmental exposure:

Negligible wastewater emissions as process operates without water contact.

Release fraction to air (after typical onsite RMMs) 1.00E-04

Release fraction to soil from process (after typical onsite RMMs) 1E-03

Release fraction to wastewater from process (after typical onsite RMMs and before sewage treatment plan) Not available.

### Technical conditions and measures at process level (source) to prevent release:

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

### Technical on-site 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.

### Organisational measures to prevent/limit release from site:

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

### Conditions and measures related to sewage treatment plant:

Estimated substance removal from wastewater via on-site sewage treatment 69.1

Assumed domestic sewage treatment plant flow rate (m<sup>3</sup>/d) 2.00E+3

Maximum allowable site tonnage (M<sub>Safe</sub>) based on release following total wastewater treatment removal as product: 19111

### 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.

## Section 3: Exposure estimation and reference to its source

### Exposure estimation and reference to its source - Environment

Exposure assessment (environment): Used ECETOC TRA model (May 2010 release).

### Exposure estimation and reference to its source - Workers

Exposure assessment (human): The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

## Section 4: Guidance to check compliance with the exposure scenario

### 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. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For further information see [www.ATIEL.org/REACH\\_GES](http://www.ATIEL.org/REACH_GES)



Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

## Annex to the extended Safety Data Sheet (eSDS)

Industrial

### Identification of the substance or mixture

Product definition	Mixture
Code	468681-DE03
Product name	Tribol GR 100-0 PD

### Section 1: Title

Short title of the exposure scenario	General use of lubricants and greases in vehicles or machinery - Industrial
List of use descriptors	<b>Identified use name:</b> General use of lubricants and greases in vehicles or machinery-Industrial <b>Process Category:</b> PROC01, PROC02, PROC08b, PROC09 <b>Sector of end use:</b> SU03 <b>Subsequent service life relevant for that use:</b> No. <b>Environmental Release Category:</b> ERC04, ERC07 <b>Specific Environmental Release Category:</b> ATIEL-ATC SPERC 4.Biv1

Processes and activities covered by the exposure scenario	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.
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### Section 2 Operational conditions and risk management measures

#### Section 2.1 Control of worker exposure

##### Product characteristics:

Physical state:	Liquid, vapour pressure < 0.5 kPa
Concentration of substance in product:	Covers use of substance/product up to 100 % (unless stated differently)
Frequency and duration of use:	Covers daily exposures up to 8 hours
Other conditions affecting workers exposure:	Assumes use at not more than 20°C above ambient temperature. Assumes a good basic standard of occupational hygiene is implemented

#### Contributing scenarios: Operational conditions and risk management measures

General measures applicable to all activities:  
Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN 374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop. Use suitable eye protection. Avoid direct eye contact with product also via contamination on hands.

General exposures (closed systems):  
No other specific measures identified.

Initial factory fill of equipment Use in contained systems:  
No other specific measures identified.

Initial factory fill of equipment Open systems:  
Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Avoid carrying out operation for more than 4 hours.

Operation of equipment containing engine oils and similar Use in contained systems:  
No other specific measures identified.

Equipment cleaning and maintenance:  
Drain down system prior to equipment break-in or maintenance. Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). Wear chemical-resistant gloves (tested to EN374) in combination with specific activity training. Retain drain-downs in sealed storage pending disposal or for subsequent recycle.

Equipment cleaning and maintenance Operation is carried out at elevated temperature (> 20°C above ambient temperature):  
Drain down and flush system prior to equipment break-in or maintenance. Provide extract ventilation to emission points when contact with warm (>50°C) lubricant is likely. Wear chemical-resistant gloves (tested to EN374) in

**Tribol GR 100-0 PD**

**General use of lubricants and greases in vehicles or machinery - Industrial**

combination with intensive management supervision controls. Retain drain-downs in sealed storage pending disposal or for subsequent recycle.

Storage:  
Store substance within a closed system.

## Section 2.2: Control of environmental exposure

### Amounts used:

**EU tonnage of risk determining substance per year:** 2.63E+3 Tonnes/year

### Frequency and duration of use:

**Emission days** 300

### Environment factors not influenced by risk management:

**Local freshwater dilution factor** 10

**Local marine water dilution factor** 100

### Other conditions affecting environmental exposure:

Negligible wastewater emissions as process operates without water contact.

**Release fraction to air (after typical onsite RMMs)** 5.00E-05

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

**Release fraction to wastewater from process (after typical onsite RMMs and before sewage treatment plan)** Not available.

### Technical conditions and measures at process level (source) to prevent release:

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

### Technical on-site 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 waste water to be discharged via a sewage treatment plant

### Organisational measures to prevent/limit release from site:

Do not apply industrial sludge to natural soils.

Sewage sludge should be incinerated, contained or reclaimed.

### Conditions and measures related to sewage treatment plant:

**Estimated substance removal from wastewater via on-site sewage treatment** 69.1

**Assumed domestic sewage treatment plant flow rate (m<sup>3</sup>/d)** 2.00E+3

**Maximum allowable site tonnage (M<sub>Safe</sub>) based on release following total wastewater treatment removal as product:** 7594049

### 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.

## Section 3: Exposure estimation and reference to its source

### Exposure estimation and reference to its source - Environment

**Exposure assessment (environment):** Used ECETOC TRA model (May 2010 release).

### Exposure estimation and reference to its source - Workers

**Exposure assessment (human):** The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated.

## Section 4: Guidance to check compliance with the exposure scenario

**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. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For further information see [www.ATIEL.org/REACH\\_GES](http://www.ATIEL.org/REACH_GES)

**Health**

Where other risk management measures/operational conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.