

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

1.1 Product identifier

Product name	Tribol GR 400-2 PD
Product code	468725-DE03
SDS #	468725
Product type	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

Use of the substance/ mixture	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

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

1.4 Emergency telephone number

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

2.1 Classification of the substance or mixture

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

Signal word	No signal word.
Hazard statements	H412 - Harmful to aquatic life with long lasting effects.
Precautionary statements	
Prevention	P273 - Avoid release to the environment.
Response	Not applicable.
Storage	Not applicable.
Disposal	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazardous ingredients	Not applicable.
Supplemental label elements	<input checked="" type="checkbox"/> Contains Reaction product of ammonium molybdate and C12-C24-diethoxylated alkylamine (1:5-1:3), Reaction products of triphenyl phosphite and isodecanol (1:1), Fatty acids, C16-18 (even numbered, C18 unsaturated), 2-ethylhexyl esters, epoxidized and 2,6-di-tert-butyl-4-nonylphenol. May produce an allergic reaction.

Product name Tribol GR 400-2 PD	Product code 468725-DE03	Page: 1/19
Version 9	Date of issue 28 November 2025	Format Germany
Date of previous issue 6 September 2023.		Language ENGLISH
	(Germany)	

SECTION 2: Hazards identification

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

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

Special packaging requirements

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

Tactile warning of danger Not applicable.

2.3 Other hazards

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.

Product meets the criteria for endocrine disrupting properties according to Regulation (EC) No. 1907/2006. This substance/mixture does not contain any components that are considered to have endocrine disrupting properties.

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.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Product definition Mixture

Highly refined base oil (IP 346 DMSO extract < 3%). Proprietary performance 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	<1	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]
Fatty acids, C16-18 (even numbered, C18 unsaturated), 2-ethylhexyl esters, epoxidized	REACH #: 01-2119977115-34 EC: 701-432-9 CAS: -	≤0.3	Skin Sens. 1B, H317	-	[1]
2,6-di-tert-butyl-4-nonylphenol	REACH #: 01-2120759723-46 EC: 224-320-7 CAS: 4306-88-1	≤0.3	Skin Sens. 1B, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M [Acute] = 1 M [Chronic] = 1	[1]

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

Eye contact	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention.
Skin contact	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. Get medical attention if irritation develops.
Inhalation	If inhaled, remove to fresh air. Get medical attention if symptoms occur.
Ingestion	Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Get medical attention if symptoms occur.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

4.2 Most important symptoms and effects, both acute and delayed

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

Potential acute health effects

Inhalation	No known significant effects or critical hazards.
Ingestion	No known significant effects or critical hazards.
Skin contact	Defatting to the skin. May cause skin dryness and irritation.
Eye contact	See: Section 11. Toxicological Information - Potential acute health effects: Eye contact

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

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

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	Treatment should in general be symptomatic and directed to relieving any effects. 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

Suitable extinguishing media	Use foam or all-purpose dry chemical to extinguish.
Unsuitable extinguishing media	Do not use water jet. The use of a water jet may cause the fire to spread by splashing the burning product.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	No specific fire or explosion hazard.
Hazardous combustion products	Combustion products may include the following: carbon oxides (CO, CO ₂) (carbon monoxide, carbon dioxide) metal oxide/oxides

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.

Product name Tribol GR 400-2 PD

Product code 468725-DE03

Page: 3/19

Version 9 **Date of issue** 28 November 2025

Format Germany

Language ENGLISH

Date of previous issue 6 September 2023.

(Germany)

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. Do not ingest. Avoid contact with eyes, skin and clothing. 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.

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

11

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.

Product name Tribol GR 400-2 PD

Product code 468725-DE03

Page: 4/19

Version 9 **Date of issue** 28 November 2025

Format Germany

Language ENGLISH

Date of previous issue 6 September 2023.

(Germany)

SECTION 8: Exposure controls/personal protection

Recommended monitoring procedures

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

Biological exposure indices

Product/ingredient name

Exposure indices

No exposure indices known.

DNELs/DMELs

Not available.

PNECs

Not available.

8.2 Exposure controls

Appropriate engineering controls

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

Individual protection measures

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection

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

Eye/face protection

Safety glasses with side shields.

Skin protection

Hand protection

General Information:

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

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

Recommended: 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

Product name Tribol GR 400-2 PD	Product code 468725-DE03	Page: 5/19
Version 9	Date of issue 28 November 2025	Format Germany
Date of previous issue 6 September 2023.	(Germany)	Language ENGLISH

SECTION 8: Exposure controls/personal protection

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

Refer to standards:

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

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

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

Physical state	Grease
Colour	Brown. [Dark]
Odour	Not available.
Odour threshold	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flammability	Not available.

Product name Tribol GR 400-2 PD	Product code 468725-DE03	Page: 6/19
Version 9	Date of issue 28 November 2025	Format Germany
Date of previous issue 6 September 2023.		Language ENGLISH
	(Germany)	

SECTION 9: Physical and chemical properties

Lower and upper explosion limit	Not applicable.
Flash point	Open cup: 268°C (514.4°F) [Estimated. Based on Lubricants - Base Oils]
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not available.
pH	Not applicable.
Kinematic viscosity	Not available.
Solubility	

Media	Result
water	Not soluble

Partition coefficient n-octanol/ water (log value)	Not applicable.
Vapour pressure	Not available. 0.01 kPa
Density and/or Relative density	<1000 kg/m ³ (<1 g/cm ³) at 20°C
Relative vapour density	Not applicable.
Particle characteristics	
Median particle size	Not available.
9.2 Other information	
Evaporation rate	Not available.
Explosive properties	Not available.
Oxidising properties	Not available.
Drop Point	>180 °C
Penetration Number (0.1 mm)	265 to 295 at 25°C

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
Reaction product of ammonium molybdate and C12-C24-diethoxylated alkylamine (1:5-1:3)	Rat - Oral - LD50 >2000 mg/kg OECD 401
	Rat - Dermal - LD50 >2000 mg/kg OECD 402
Reaction products of triphenyl phosphite and isodecanol (1:1)	Rat - Oral - LC50 3840 mg/kg OECD 401
	Rabbit - Dermal - LC50 >5000 mg/kg OECD 402

Product name Tribol GR 400-2 PD

Product code 468725-DE03

Page: 7/19

Version 9 **Date of issue** 28 November 2025

Format Germany

Language ENGLISH

Date of previous issue 6 September 2023.

(Germany)

SECTION 11: Toxicological information

2,6-di-tert-butyl-4-nonylphenol

Rat - Inhalation - LC50 Vapour
>8.4 mg/l [4 hours]
OECD 403

Rat - Oral - LD50
>2000 mg/kg
OECD 401

Rat - Dermal - LD50
>2000 mg/kg
OECD 402

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)
Reaction products of triphenyl phosphite and isodecanol (1:1)	2500	N/A	N/A	N/A	N/A

Skin corrosion/irritation

Product/ingredient name	Result
Reaction product of ammonium molybdate and C12-C24-diethoxylated alkylamine (1:5-1:3)	Rabbit - Skin - Moderate irritant OECD 404
Reaction products of triphenyl phosphite and isodecanol (1:1)	Rabbit - Skin - Slightly irritating to the skin. OECD 404
2,6-di-tert-butyl-4-nonylphenol	Rabbit - Skin - Mild irritant OECD 404

Serious eye damage/eye irritation

Product/ingredient name	Result
Reaction product of ammonium molybdate and C12-C24-diethoxylated alkylamine (1:5-1:3)	Rabbit - Eyes - Redness of the conjunctivae OECD 405 Irritation score: ≥2
Reaction products of triphenyl phosphite and isodecanol (1:1)	Rabbit - Eyes - Slightly irritating to the eyes. ASTM
2,6-di-tert-butyl-4-nonylphenol	Rabbit - Eyes - Slightly irritating to the eyes. OECD 405

Respiratory corrosion/irritation

Not available.

Respiratory or skin sensitization

Product/ingredient name	Result
Reaction product of ammonium molybdate and C12-C24-diethoxylated alkylamine (1:5-1:3)	Guinea pig - skin OECD 406 Result: Sensitising
Reaction products of triphenyl phosphite and isodecanol (1:1)	Guinea pig - skin OECD 406 Result: Sensitising
2,6-di-tert-butyl-4-nonylphenol	Mouse - skin OECD 429 Result: Sensitising

SECTION 11: Toxicological information

Germ cell mutagenicity

Product/ingredient name

☑ Reaction products of triphenyl phosphite and isodecanol (1:1)

Result

In vitro - Bacteria
OECD 471
Result: Negative

In vitro - Mammalian-Animal
OECD 487
Result: Negative

In vivo - Mammalian-Animal
OECD 474
Result: Negative

2,6-di-tert-butyl-4-nonylphenol

In vitro - Bacteria
OECD 471
Result: Negative

In vitro - Mammalian-Animal
OECD 487
Result: Negative

In vitro - Mammalian-Animal
OECD 4776
Result: Negative

Carcinogenicity

Not available.

Reproductive toxicity

Product/ingredient name

☑ Reaction products of triphenyl phosphite and isodecanol (1:1)

Result

Rat - Oral
OECD 422
Maternal toxicity: Negative
Fertility effects: Negative
Developmental: Negative

2,6-di-tert-butyl-4-nonylphenol

Rat - Oral
OECD 422
Maternal toxicity: Positive
Fertility effects: Negative

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Product/ingredient name

☑ Reaction products of triphenyl phosphite and isodecanol (1:1)

Result

STOT RE 2, H373

Aspiration hazard

Not available.

Information on likely routes of exposure

☑ Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

- Inhalation** No known significant effects or critical hazards.
- Ingestion** No known significant effects or critical hazards.
- Skin contact** Defatting to the skin. May cause skin dryness and irritation.
- Eye contact** ☑ No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Product name Tribol GR 400-2 PD	Product code 468725-DE03	Page: 9/19
Version 9	Date of issue 28 November 2025	Format Germany
Date of previous issue 6 September 2023.		Language ENGLISH
	(Germany)	

SECTION 11: Toxicological information

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

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

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

Potential chronic health effects

Not available.

Conclusion/Summary [Product]	Not available.
General	No known significant effects or critical hazards.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Conclusion/Summary [Product]	This substance/mixture does not contain any components that are considered to have endocrine disrupting properties.
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11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result
Reaction product of ammonium molybdate and C12-C24-diethoxylated alkylamine (1:5-1:3)	Chronic - EC50 Daphnia 6.8 mg/l [48 hours]
Reaction products of triphenyl phosphite and isodecanol (1:1)	Acute - EC50 OECD 201 Algae 1.6 mg/l [72 hours]
	Acute - EC50 OECD 202 Daphnia 1 to 5 mg/l [48 hours]
	Acute - LC50 OECD 203 Fish >16 mg/l [96 hours]
	Acute - EC50 OECD 209 Micro-organism >100 mg/l [3 hours]
2,6-di-tert-butyl-4-nonylphenol	Acute - ErC50 OECD 201 Algae >100 mg/l [72 hours]
	Acute - EC50 OECD 202 Daphnia 0.124 mg/l [48 hours]
	Acute - LC50

Product name Tribol GR 400-2 PD

Product code 468725-DE03

Page: 10/19

Version 9 **Date of issue** 28 November 2025

Format Germany

Language ENGLISH

Date of previous issue 6 September 2023.

(Germany)

SECTION 12: Ecological information

OECD 203
Fish
>10 mg/l [96 hours]

Acute - EC50
OECD 209
Micro-organism
>1000 mg/l [3 hours]

Chronic - EC10
OECD 201
Algae
100 mg/l [72 hours]

Environmental hazards Harmful to aquatic life with long lasting effects.

12.2 Persistence and degradability

Not expected to be rapidly degradable.

Product/ingredient name	Result
Reaction products of triphenyl phosphite and isodecanol (1:1)	17% [28 days]
2,6-di-tert-butyl-4-nonylphenol	OECD 302C 31% [28 days]

12.3 Bioaccumulative potential

Not available.

12.4 Mobility in soil

Soil/water partition coefficient

Product/ingredient name	logKoc	Koc
Reaction products of triphenyl phosphite and isodecanol (1:1)	4.01	10197.9
2,6-di-tert-butyl-4-nonylphenol	4.79	61002.8

Results of PMT and vPvM assessment

Product/ingredient name	PMT	P	M	T	vPvM	vP	vM
Reaction product of ammonium molybdate and C12-C24-diethoxylated alkylamine (1:5-1:3)	No	No	No	No	No	No	No
Reaction products of triphenyl phosphite and isodecanol (1:1)	No	No	No	No	No	No	No
Fatty acids, C16-18 (even numbered, C18 unsaturated), 2-ethylhexyl esters, epoxidized	No	No	No	No	No	No	No
2,6-di-tert-butyl-4-nonylphenol	No	No	No	No	No	No	No

Mobility Grease. insoluble in water.

Conclusion/Summary The product does not meet the criteria to be considered as a PMT or vPvM.

12.5 Results of PBT and vPvB assessment

Regulation (EC) No. 1907/2006 [REACH]

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Reaction product of ammonium molybdate and C12-C24-diethoxylated alkylamine (1:5-1:3)	No	N/A	N/A	No	N/A	N/A	N/A
Reaction products of triphenyl phosphite and isodecanol (1:1)	N/A	N/A	N/A	Yes	N/A	N/A	N/A
Fatty acids, C16-18 (even numbered, C18 unsaturated), 2-ethylhexyl	No	N/A	N/A	No	N/A	N/A	N/A

SECTION 12: Ecological information

esters, epoxidized 2,6-di-tert-butyl- 4-nonylphenol	No	N/A	N/A	No	N/A	N/A	N/A
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Regulation (EC) No. 1272/2008 [CLP]

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Reaction product of ammonium molybdate and C12-C24-diethoxylated alkylamine (1:5-1:3)	No	No	No	No	No	No	No
Reaction products of triphenyl phosphite and isodecanol (1:1)	No	No	No	No	No	No	No
Fatty acids, C16-18 (even numbered, C18 unsaturated), 2-ethylhexyl esters, epoxidized	No	No	No	No	No	No	No
2,6-di-tert-butyl-4-nonylphenol	No	No	No	No	No	No	No

Conclusion/Summary

Regulation (EC) No. 1272/2008 [CLP]

The product does not meet the criteria to be considered as a PBT or vPvB.

12.6 Endocrine disrupting properties

Conclusion/Summary [Product]

This substance/mixture does not contain any components that are considered to have endocrine disrupting properties.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal

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

Hazardous waste

Yes.

European waste catalogue (EWC)

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

Methods of disposal

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

Waste code	European waste catalogue (EWC)
15 01 10*	packaging containing residues of or contaminated by hazardous substances

Special precautions

This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

References

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

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.
Additional information	-	-	-	-

14.6 Special precautions for user Not available.

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

SECTION 15: Regulatory information

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

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

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

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

Product/ingredient name	%	Designation [Usage]
<input checked="" type="checkbox"/> nonylphenol, branched	<0.001	46

Labelling 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 (AIC)

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.

Explosive precursors

Not applicable.

Ozone depleting substances (EU 2024/590)

Not listed.

Product name Tribol GR 400-2 PD	Product code 468725-DE03	Page: 13/19
Version 9	Date of issue 28 November 2025	Format Germany
Date of previous issue 6 September 2023.		Language ENGLISH
	(Germany)	

SECTION 15: Regulatory information

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

This product is not controlled under the Germany Hazardous Incident Ordinance.

Hazard class for water	2	(classified according AwSV)
Prohibited Chemicals Regulation (ChemVerbotsV)	When placed on the market in Germany, this product is not subject to the Prohibited Chemicals Regulation (ChemVerbotsV).	
Occupational restrictions	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

Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
 ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
 ATE = Acute Toxicity Estimate
 BCF = Bioconcentration Factor
 CAS = Chemical Abstracts Service
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
 CSA = Chemical Safety Assessment
 CSR = Chemical Safety Report
 DMEL = Derived Minimal Effect Level
 DNEL = Derived No Effect Level
 EINECS = European Inventory of Existing Commercial chemical Substances
 ES = Exposure Scenario
 EUH statement = CLP-specific Hazard statement
 EWC = European Waste Catalogue
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 OECD = Organisation for Economic Co-operation and Development
 PBT = Persistent, Bioaccumulative and Toxic
 PNEC = Predicted No Effect Concentration
 REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006]
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
 RRN = REACH Registration Number
 SADT = Self-Accelerating Decomposition Temperature
 SVHC = Substances of Very High Concern
 STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
 STOT-SE = Specific Target Organ Toxicity - Single Exposure
 TWA = Time weighted average
 UN = United Nations
 UVCB = Complex hydrocarbon substance
 VOC = Volatile Organic Compound
 vPvB = Very Persistent and Very Bioaccumulative
 Varies = may contain one or more of the following 64741-88-4 / RRN 01-2119488706-23,

Product name Tribol GR 400-2 PD	Product code 468725-DE03	Page: 14/19
Version 9	Date of issue 28 November 2025	Format Germany
Date of previous issue 6 September 2023.		Language ENGLISH
	(Germany)	

SECTION 16: Other information

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

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

Classification		Justification
Aquatic Chronic 3, H412		Calculation method
Full text of abbreviated H statements	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.
Full text of classifications [CLP/GHS]	H411	Toxic to aquatic life with long lasting effects.
	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

Date of issue/ Date of revision	28/11/2025.
Date of previous issue	06/09/2023.
Prepared by	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.

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

Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition	Mixture
Code	468725-DE03
Product name	Tribol GR 400-2 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	<p>Identified use name: General use of lubricants and greases in vehicles or machinery-Industrial</p> <p>Process Category: PROC01, PROC08b, PROC09, PROC02</p> <p>Sector of end use: SU03</p> <p>Subsequent service life relevant for that use: No.</p> <p>Environmental Release Category: ERC04, ERC07</p> <p>Specific Environmental Release Category: ATIEL-ATC SPERC 4.Biv1</p>

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

No exposure scenario is presented because the product is not classified for Human Health

Contributing scenarios: Operational conditions and risk management measures

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 operational conditions of use 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.

Tribol GR 400-2 PD

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

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. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to municipal sewage treatment plant:	
Estimated substance removal from wastewater via on-site sewage treatment	Not available.
Assumed domestic sewage treatment plant flow rate (m3/d)	2.00E+3
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal as product:	Not available.
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):	No exposure scenario is presented because the product is not classified for Human Health

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
Health	No exposure scenario is presented because the product is not classified for Human Health

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition	Mixture
Code	468725-DE03
Product name	Tribol GR 400-2 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	<p>Identified use name: General use of lubricants and greases in vehicles or machinery-Professional</p> <p>Process Category: PROC01, PROC02, PROC08a, PROC08b, PROC20</p> <p>Sector of end use: SU22</p> <p>Subsequent service life relevant for that use: No.</p> <p>Environmental Release Category: ERC09a, ERC09b</p> <p>Specific Environmental Release Category: ATIEL-ATC SPERC 9.Bp.v1</p>

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

No exposure scenario is presented because the product is not classified for Human Health

Contributing scenarios: Operational conditions and risk management measures

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 operational conditions of use 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.

Tribol GR 400-2 PD

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

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. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to municipal sewage treatment plant:	
Estimated substance removal from wastewater via on-site sewage treatment	No data available yet
Assumed domestic sewage treatment plant flow rate (m3/d)	2.00E+3
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal as product:	No data available yet
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):	No exposure scenario is presented because the product is not classified for Human Health

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
Health	No exposure scenario is presented because the product is not classified for Human Health