

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

Product name	Product MG 0272 GR
UFI:	6S4-S036-X008-JJTM
Product code	471055-DE03
SDS #	471055
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 MSDSadvice@bp.com
E-mail address	

**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]	
Skin Sens. 1, H317	

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**

UFI:	6S4-S036-X008-JJTM
Hazard pictograms	



Signal word	Warning
Hazard statements	H317 - May cause an allergic skin reaction.
Prevention	P280 - Wear protective gloves. P261 - Avoid breathing dust.
Response	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.

Product name	Product MG 0272 GR	Product code	471055-DE03	Page:	1/19
Version	1.01	Date of issue	2 September 2024	Format	Germany
Date of previous issue	23 July 2024.			Language	ENGLISH
					(Germany)

SECTION 2: Hazards identification

Storage	Not applicable.
Disposal	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazardous ingredients	Naphthenic acids, zinc salts  5,5'-dithiodi-1,3,4-thiadiazole-2(3H)-thione
Supplemental label elements	Not applicable.
EU Regulation (EC) No. 1907/2006 (REACH)	
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	Not applicable.
Special packaging requirements	
Containers to be fitted with child-resistant fastenings	Not applicable.
Tactile warning of danger	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.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Product definition Mixture  
Synthetic lubricant and additives. Thickening agent.

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Dilithium azelate (Nonanedioic acid dilithium salt)	REACH #: 01-2120119814-57 EC: 254-184-4 CAS: 38900-29-7	≤10	Acute Tox. 4, H302	ATE [Oral] = 500 mg/kg	[1]
Naphthenic acids, zinc salts	REACH #: 01-2120783834-41 EC: 234-409-2 CAS: 12001-85-3	<2.5	Eye Irrit. 2, H319 Skin Sens. 1B, H317 Aquatic Chronic 2, H411	-	[1] [2]
4,4'-methylene bis (dibutylidithiocarbamate)	REACH #: 01-2119969655-20 EC: 233-593-1 CAS: 10254-57-6	≤3	Aquatic Chronic 4, H413	-	[1] [2]
5,5'-dithiodi-1,3,4-thiadiazole-2 (3H)-thione	REACH #: 01-2120119820-64 EC: 276-763-0 CAS: 72676-55-2	<1	Skin Sens. 1B, H317 Aquatic Chronic 2, H411	-	[1]

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

- [1] Substance classified with a health or environmental hazard  
[2] Substance with a workplace exposure limit

**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>	<p>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.</p> <p>Note: High Pressure Applications</p> <p>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.</p>
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**SECTION 5: Firefighting measures****5.1 Extinguishing media**

<b>Suitable extinguishing media</b>	In case of fire, use water fog, alcohol resistant foam, dry chemical or carbon dioxide extinguisher or spray.
<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.
<b>Hazardous combustion products</b>	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**

<b>Product name</b>	Product MG 0272 GR	<b>Product code</b>	471055-DE03	<b>Page:</b>	3/19
<b>Version</b>	1.01	<b>Date of issue</b>	2 September 2024	<b>Format</b>	Germany
<b>Date of previous issue</b>	23 July 2024.			<b>Language</b>	ENGLISH
			(Germany)		

SECTION 5: Firefighting measures

Special precautions for fire-fighters	No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.
Special protective equipment for fire-fighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	Contact emergency personnel. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Floors may be slippery; use care to avoid falling. 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).
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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.
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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. 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.
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.
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<b>Product name</b> Product MG 0272 GR		<b>Product code</b> 471055-DE03		<b>Page:</b> 4/19
<b>Version</b> 1.01	<b>Date of issue</b> 2 September 2024	<b>Format</b> Germany	<b>Language</b> ENGLISH	
<b>Date of previous issue</b> 23 July 2024.		(Germany)		

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

Product/ingredient name	Exposure limit values
Naphthenic acids, zinc salts	<b>DFG MAC-values list (Germany). [Zinc and its inorganic compounds]</b> TWA: 2 mg/m³ 8 hours. Issued/Revised: 7/2013 Form: inhalable fraction PEAK: 4 mg/m³, 4 times per shift, 15 minutes. Issued/Revised: 7/2013 Form: inhalable fraction PEAK: 0.4 mg/m³, 4 times per shift, 15 minutes. Issued/Revised: 7/2013 Form: respirable fraction TWA: 0.1 mg/m³ 8 hours. Issued/Revised: 7/2013 Form: respirable fraction
4,4'-methylene bis(dibutyldithiocarbamate)	<b>TRGS 900 OEL (Germany).</b> PEAK: 20 mg/m³ 15 minutes. Issued/Revised: 5/2020 Form: Respirable fraction TWA: 5 mg/m³ 8 hours. Issued/Revised: 5/2020 Form: Respirable fraction PEAK: 160 mg/m³ 15 minutes. Issued/Revised: 5/2020 Form: Inhalable fraction TWA: 20 mg/m³ 8 hours. Issued/Revised: 5/2020 Form: Inhalable fraction

**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

Product/ingredient name	Type	Exposure	Value	Population	Effects
Dilithium azelate (Nonanedioic acid dilithium salt)	DNEL	Long term Dermal -	13.5 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Dermal -	0.172 mg/cm²	Workers	Local

Predicted No Effect Concentration

Product/ingredient name	Compartment Detail	Value	Method Detail
Dilithium azelate (Nonanedioic acid dilithium salt)	Fresh water	0.023 mg/l	Assessment Factors
	Marine water	0.0023 mg/l	Assessment Factors
	Intermittent release	0.23 mg/l	Assessment Factors

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. 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

<b>Product name</b> Product MG 0272 GR	<b>Product code</b> 471055-DE03	<b>Page:</b> 5/19
<b>Version</b> 1.01	<b>Date of issue</b> 2 September 2024	<b>Format</b> Germany
<b>Date of previous issue</b> 23 July 2024.		<b>Language</b> ENGLISH (Germany)

**SECTION 8: Exposure controls/personal protection****Eye/face protection****Skin protection****Hand 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.

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.



SECTION 8: Exposure controls/personal protection

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	Yellow. [Light]																			
Odour	Not available.																			
Odour threshold	Not available.																			
Melting point/freezing point	Not available.																			
Initial boiling point and boiling range	Not available.																			
Flammability	Not available.																			
Lower and upper explosion limit	Not applicable.																			
Flash point	Closed cup: 267°C (512.6°F) [Estimated. Based on Lubricants - Base Oils]																			
Auto-ignition temperature	Not applicable.																			
Decomposition temperature	Not available.																			
pH	Not applicable.																			
Kinematic viscosity	Not available.																			
Solubility	<table><tr><th>Media</th><th>Result</th></tr><tr><td>water</td><td>Not soluble</td></tr></table>	Media	Result	water	Not soluble															
Media	Result																			
water	Not soluble																			
Partition coefficient n-octanol/ water (log value)	Not applicable.																			
Vapour pressure	Not available. <table><tr><th rowspan="2">Ingredient name</th><th colspan="2">Vapour Pressure at 20°C</th><th colspan="3">Vapour pressure at 50°C</th></tr><tr><th>mm Hg</th><th>kPa</th><th>Method</th><th>mm Hg</th><th>kPa</th><th>Method</th></tr><tr><td>Not available.</td><td></td><td></td><td></td><td></td><td></td><td></td></tr></table>	Ingredient name	Vapour Pressure at 20°C		Vapour pressure at 50°C			mm Hg	kPa	Method	mm Hg	kPa	Method	Not available.						
Ingredient name	Vapour Pressure at 20°C		Vapour pressure at 50°C																	
	mm Hg	kPa	Method	mm Hg	kPa	Method														
Not available.																				
Density and/or Relative density	<1000 kg/m³ (<1 g/cm³) 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.																			

SECTION 9: Physical and chemical properties

Oxidising properties	Not available.
Drop Point	>210 °C
Penetration Number (0.1 mm)	310 to 340 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	Hazardous polymerization may occur under certain conditions of storage or use.
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
Dilithium azelate (Nonanedioic acid dilithium salt)	LD50 Dermal	OECD 402	Rabbit	>2000 mg/kg	-	-
	LD50 Oral	OECD 401	Rat	>300 mg/kg	-	-
Naphthenic acids, zinc salts	LD50 Dermal	OECD 402	Rabbit	>2000 mg/kg	-	-
	LD50 Oral	OECD 423	Rat	>5000 mg/kg	-	-
4,4'-methylene bis (dibutylidithiocarbamate)	LD50 Dermal	OECD 402	Rabbit	>2000 mg/kg	-	-
	LD50 Oral	OECD 401	Rat	>5000 mg/kg	-	-
5,5'-dithiodi-1,3,4-thiadiazole-2(3H)-thione	LD50 Dermal	OECD 402	Rabbit	>2000 mg/kg	-	-
	LD50 Oral	OECD 420	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)
Product MG 0272 GR	7243.8	N/A	N/A	N/A	N/A
Dilithium azelate (Nonanedioic acid dilithium salt)	500	N/A	N/A	N/A	N/A

Irritation/Corrosion

Product/ingredient name	Test authority / Test number	Species	Route / Result	Test concentration	Remarks
Dilithium azelate (Nonanedioic acid dilithium salt)	OECD 405	Rabbit	Eyes - Not irritant	-	-
	OECD 439	RhE	Skin - Not irritant	-	-
Naphthenic acids, zinc salts	OECD 492	RhCE	Eyes - Irritant	-	-

Product name	Product MG 0272 GR	Product code	471055-DE03	Page:	8/19
Version	1.01	Date of issue	2 September 2024	Format	Germany
Date of previous issue	23 July 2024.			Language	ENGLISH
			(Germany)		



SECTION 11: Toxicological information

4,4'-methylene bis (dibutyldithiocarbamate)	OECD	439	RhE	Skin - Not irritant	-	-
	OECD	405	Rabbit	Eyes - Not irritant	-	-
	OECD	404	Rabbit	Skin - Not irritant	-	-
	OECD	405	Rabbit	Eyes - Not irritant	-	-
	OECD	404	Rabbit	Skin - Not irritant	-	-
5,5'-dithiodi- 1,3,4-thiadiazole-2(3H)- thione	OECD	405	Rabbit	Eyes - Not irritant	-	-
	OECD	404	Rabbit	Skin - Not irritant	-	-

Sensitiser

Product/ingredient name	Route	Test authority / Test number		Species	Result	Remarks
Dilithium azelate (Nonanedioic acid dilithium salt)	skin	OECD	429	Mouse	Not sensitising	-
Naphthenic acids, zinc salts	skin	OECD	442D	Unspecified	Sensitising	-
4,4'-methylene bis (dibutyldithiocarbamate)	skin	OECD	429	Mouse	Not sensitising	-
5,5'-dithiodi- 1,3,4-thiadiazole-2(3H)- thione	skin	OECD	429	Mouse	Sensitising	-

GERM CELL MUTAGENICITY

Product/ingredient name	Test authority / Test number	Cell		Type	Result	Remarks
Dilithium azelate (Nonanedioic acid dilithium salt)	OECD 471	-	Experiment: In vitro	Subject: Bacteria	Negative	-
	OECD 473	-	Experiment: In vitro	Subject: Mammalian- Animal	Negative	Based on studies with similar substances.
	OECD 476	-	Experiment: In vitro	Subject: Mammalian- Animal	Negative	Based on studies with similar substances.
Naphthenic acids, zinc salts	OECD 471	-	Experiment: In vitro	Subject: Bacteria	Negative	Based on studies with similar substances.
	OECD 473	-	Experiment: In vitro	Subject: Mammalian- Animal	Negative	Based on studies with similar substances.
	OECD 476	-	Experiment: In vitro	Subject: Mammalian- Animal	Negative	-
4,4'-methylene bis (dibutyldithiocarbamate)	OECD 471	-	Experiment: In vitro	Subject: Bacteria	Negative	-
	OECD 473	-	Experiment: In vitro	Subject: Mammalian- Animal	Negative	-
	OECD 476	-	Experiment: In vitro	Subject: Mammalian- Animal	Negative	-
5,5'-dithiodi- 1,3,4-thiadiazole-2 (3H)-thione	OECD 476	-	Experiment: In vitro	Subject: Mammalian- Animal	Positive	-
	OECD 471	-	Experiment:	Subject: Bacteria	Negative	-

SECTION 11: Toxicological information

		In vitro			
OECD 487	-	Experiment: In vitro	Subject: Mammalian- Animal	Negative	-

Carcinogenicity

Not available.

Reproductive toxicity

Product/ ingredient name	Test authority / Test number	Species	Route	Exposure	Developmental	Maternal toxicity	Fertility	Remarks
Dilithium azelate (Nonanedioic acid dilithium salt)	OECD 422	Rat	Dermal	-	Negative	Negative	Negative	-
Naphthenic acids, zinc salts	OECD 422	Rat	Oral	-	Negative	Negative	Negative	Based on studies with similar substances.
4,4'-methylene bis (dibutylthiocarbamate)	OECD 422	Rat	Oral	-	Negative	Negative	Negative	-
5,5'-dithiodi- 1,3,4-thiadiazole-2 (3H)-thione	OECD 422	Rat	Oral	-	Negative	Positive	Negative	-

Aspiration hazard

Product/ingredient name	Result
Not available.	

Conclusion/Summary	Not classified. Based on available data, the classification criteria are not met.
Conclusion/Summary	Not available.
Information on likely routes of exposure	Routes of entry anticipated: Oral, 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	
Inhalation	No specific data.
Ingestion	No specific data.
Skin contact	Adverse symptoms may include the following: irritation redness 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	
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

Product name	Product MG 0272 GR	Product code	471055-DE03	Page:	10/19
Version	1.01	Date of issue	2 September 2024	Format	Germany
Date of previous issue	23 July 2024.			Language	ENGLISH
			(Germany)		

SECTION 11: Toxicological information

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
Dilithium azelate (Nonanedioic acid dilithium salt)	OECD	202	Daphnia	Acute EC50 >100 mg/l	48 hours	-	-
	OECD	203	Fish	Acute EC50 >100 mg/l	96 hours	-	-
	OECD	201	Algae	Acute ErC50 23 mg/l	72 hours	-	Based on studies with similar substances.
	OECD	201	Algae	Chronic NOEC 3.2 mg/l	72 hours	-	Based on studies with similar substances.
Naphthenic acids, zinc salts	OECD	202	Daphnia	Acute EL50 35 mg/l	48 hours	-	-
	OECD	201	Algae	Acute ErL50 4 mg/l	72 hours	-	-
	OECD	203	Fish	Acute LL50 ≥100 mg/l	96 hours	-	-
	OECD	201	Algae	Chronic NOELR 1 mg/l	72 hours	-	-
4,4'-methylene bis (dibutyldithiocarbamate)	OECD	202	Daphnia	Acute EC50 >0.052 mg/l	48 hours	-	-
	OECD	203	Fish	Acute EL50 >0.06 mg/l	96 hours	-	-
	OECD	201	Algae	Acute ErC50 >0.0325 mg/l	72 hours	-	-
	OECD	201	Algae	Chronic NOEC 0.0325 mg/l	72 hours	-	-
5,5'-dithiodi-1,3,4-thiadiazole-2(3H)-thione	OECD	211	Daphnia	Chronic NOEC 0.247 mg/l	21 days	-	-
	OECD	202	Daphnia	Acute EC50 3 mg/l	48 hours	-	-
	OECD	203	Fish	Acute EC50 >454 mg/l	96 hours	-	-
	OECD	201	Algae	Acute ErC50 20 mg/l	72 hours	-	-
	OECD	201	Algae	Chronic NOEC 9.4 mg/l	72 hours	-	-

Environmental hazards Not classified as dangerous

12.2 Persistence and degradability

Not expected to be rapidly degradable.

SECTION 12: Ecological information

Product/ingredient name	Test authority / Test number	Result - Exposure	Remarks
Dilithium azelate (Nonanedioic acid dilithium salt)	OECD 301B	91 % - Readily - 28 days	-
4,4'-methylene bis (dibutyldithiocarbamate)	OECD 301B	21 % - Not readily - 28 days	-
5,5'-dithiodi-1,3,4-thiadiazole-2 (3H)-thione	OECD 301B	0 % - Not readily - 28 days	-

12.3 Bioaccumulative potential

Not available.

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
dilithium azelate	-3.3	-	Low
4,4'-methylene bis (dibutyldithiocarbamate)	8.42	10.86	Low
5,5'-dithiodi-1,3,4-thiadiazole-2 (3H)-thione	1.46	-	Low

12.4 Mobility in soil

Soil/water partition coefficient (K <sub>oc</sub> )	Not available.
Mobility	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.

12.6 Endocrine disrupting properties	Not available.
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

Product name	Product MG 0272 GR	Product code	471055-DE03	Page:	12/19
Version	1.01	Date of issue	2 September 2024	Format	Germany (Germany)
Date of previous issue	23 July 2024.	Language	ENGLISH		

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](#)

No listed substance

[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 \(AIIIC\)](#)

All components are listed or exempted.

[Canada inventory](#)

All components are listed or exempted.

[China inventory \(IECSC\)](#)

All components are listed or exempted.

[Japan inventory \(CSCL\)](#)

At least one component is not listed.

[Korea inventory \(KECI\)](#)

All components are listed or exempted.

[Philippines inventory \(PICCS\)](#)

All components are listed or exempted.

[Taiwan Chemical Substances Inventory \(TCSI\)](#)

All components are listed or exempted.

[Explosive precursors](#)

Not applicable.

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

Not listed.

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

Not listed.

[Product name](#) Product MG 0272 GR

[Product code](#) 471055-DE03

[Page:](#) 13/19

[Version](#) 1.01      [Date of issue](#) 2 September 2024

[Format](#) Germany

[Language](#) ENGLISH

[Date of previous issue](#) 23 July 2024.

(Germany)

SECTION 15: Regulatory information

<a href="#">Persistent Organic Pollutants</a>	
Not listed.	
<a href="#">EU - Water framework directive - Priority substances</a>	
None of the components are listed.	
<a href="#">Seveso Directive</a>	
This product is not controlled under the Seveso Directive.	
<a href="#">National regulations</a>	
<a href="#">Hazardous incident ordinance</a>	
This product is not controlled under the Germany Hazardous Incident Ordinance.	
<a href="#">Hazard class for water</a>	1 (classified according AwSV)
<a href="#">Prohibited Chemicals Regulation (ChemVerbotsV)</a>	When placed on the market in Germany, this product is not subject to the Prohibited Chemicals Regulation (ChemVerbotsV).
<a href="#">Occupational restrictions</a>	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)
<a href="#">15.2 Chemical safety assessment</a>	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

<a href="#">Abbreviations and acronyms</a>	
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	

<a href="#">Product name</a>	Product MG 0272 GR	<a href="#">Product code</a>	471055-DE03	<a href="#">Page:</a>	14/19
<a href="#">Version</a>	1.01	<a href="#">Date of issue</a>	2 September 2024	<a href="#">Format</a>	Germany
<a href="#">Date of previous issue</a>	23 July 2024.	<a href="#">Language</a>	ENGLISH	<a href="#">(Germany)</a>	



SECTION 16: Other information

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
Skin Sens. 1, H317		Calculation method
Full text of abbreviated H statements	H302	Harmful if swallowed.
	H317	May cause an allergic skin reaction.
	H319	Causes serious eye irritation.
	H411	Toxic to aquatic life with long lasting effects.
	H413	May cause long lasting harmful effects to aquatic life.
Full text of classifications [CLP/GHS]	Acute Tox. 4	ACUTE TOXICITY - Category 4
	Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
	Aquatic Chronic 4	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 4
	Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
	Skin Sens. 1B	SKIN SENSITISATION - Category 1B

History

Date of issue/ Date of revision	02/09/2024.
Date of previous issue	23/07/2024.
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	471055-DE03
Product name	Product MG 0272 GR

### 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><b>Identified use name:</b> General use of lubricants and greases in vehicles or machinery-Industrial</p> <p><b>Process Category:</b> PROC01, PROC02, PROC08b, PROC09</p> <p><b>Sector of end use:</b> SU03</p> <p><b>Subsequent service life relevant for that use:</b> No.</p> <p><b>Environmental Release Category:</b> ERC04, ERC07</p> <p><b>Specific Environmental Release Category:</b> 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

#### 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. 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

Product MG 0272 GR

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

No exposure scenario is presented because the product is not classified for the Environment

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

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

**Exposure assessment (environment):**

No exposure scenario is presented because the product is not classified for the Environment

### 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.

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

Professional

### Identification of the substance or mixture

Product definition	Mixture
Code	471055-DE03
Product name	Product MG 0272 GR

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

#### 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

No exposure scenario is presented because the product is not classified for the Environment

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

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

#### Exposure assessment (environment):

No exposure scenario is presented because the product is not classified for the Environment

### 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.