

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

1.1 Product identifier

Product name	Molub-Alloy OG 936 SF Heavy
UFI:	ATU1-T096-E005-036P
Product code	468617-DE03
SDS #	468617
Product type	Grease

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

Identified uses
Use of lubricants and greases in open systems-Industrial Use of lubricants and greases in open systems-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 ESPAÑA, S.L.U. Calle Quintanadueñas, 6 Edificio Arqbores 28050 Las Tablas, Madrid +34 902 400 702 MSDSadvice@bp.com
E-mail address	

1.4 Emergency telephone number

EMERGENCY TELEPHONE NUMBER	Carechem: +44 (0) 1235 239 670 (24/7)
Spain Poison Center	Poisons Information Service (National Institute of Toxicology and Forensic Sciences) Phone: +34 91 562 04 20 Information in Spanish (24h / 365 days). Only for providing health response in case of emergency.

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:	ATU1-T096-E005-036P
Hazard pictograms	
Signal word	Warning
Hazard statements	H317 - May cause an allergic skin reaction.
Precautionary statements	

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SECTION 2: Hazards identification

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.
Storage	Not applicable.
Disposal	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazardous ingredients	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.
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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

Highly refined base oil (IP 346 DMSO extract < 3%). and additives. Thickening agent.

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Petroleum resins	REACH #: 01-2119480172-44 EC: 232-490-9 CAS: 8052-42-4	≥25 - ≤50	Not classified.	-	[2]
Distillates (petroleum), hydrotreated heavy naphthenic	REACH #: 01-2119467170-45 EC: 265-155-0 CAS: 64742-52-5 Index: 649-465-00-7	≥10 - ≤25	Not classified.	-	[2]
Graphite	REACH #: 01-2119486977-12 EC: 231-955-3 CAS: 7782-42-5	≥10 - ≤25	Not classified.	-	[2]
Distillates (petroleum), hydrotreated heavy paraffinic	REACH #: 01-2119484627-25 EC: 265-157-1 CAS: 64742-54-7 Index: 649-467-00-8	≥10 - ≤25	Not classified.	-	[2]
Residual oils (petroleum), solvent-dewaxed	REACH #: 01-2119480472-38 EC: 265-166-0	≤5	Not classified.	-	[2]

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SECTION 3: Composition/information on ingredients

Distillates (petroleum), solvent-dewaxed heavy paraffinic	CAS: 64742-62-7				
	Index: 649-471-00-X				
	REACH #:	≤5	Not classified.	-	[2]
	01-2119471299-27				
Carbon black	EC: 265-169-7				
	CAS: 64742-65-0				
	Index: 649-474-00-6				
	EC: 215-609-9	≤3	Not classified.	-	[2]
Molybdenum disulphide	CAS: 1333-86-4				
	EC: 215-263-9	≤3	Not classified.	-	[2]
	CAS: 1317-33-5				
	REACH #:	<2.5	Skin Sens. 1B, H317	-	[1]
5,5'-dithiodi-1,3,4-thiadiazole-2(3H)-thione	01-2120119820-64		Aquatic Chronic 2, H411		
	EC: 276-763-0				
	CAS: 72676-55-2				
	REACH #:	<0.1	Acute Tox. 4, H302	ATE [Oral] = 500 mg/	[1]
(Z)-N-9-octadecenylpropane-1,3-diamine	01-2119487002-46		Skin Corr. 1B, H314	kg	
	EC: 230-528-9		Eye Dam. 1, H318	M [Acute] = 10	
	CAS: 7173-62-8		STOT RE 1, H372	M [Chronic] = 1	
			Aquatic Acute 1, H400		
			Aquatic Chronic 1, H410		

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

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

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. In the event of any complaints or symptoms, avoid further exposure. Get medical attention.

Inhalation

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.

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. 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**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.

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

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SECTION 4: First aid measures**Notes to physician**

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

SECTION 5: Firefighting measures**5.1 Extinguishing media****Suitable extinguishing media**

In case of fire, use water fog, alcohol resistant foam, dry chemical or carbon dioxide extinguisher or spray.

Unsuitable extinguishing media

Do not use water jet. The use of a water jet may cause the fire to spread by splashing the burning product.

5.2 Special hazards arising from the substance or mixture**Hazards from the substance or mixture**

No specific fire or explosion hazard.

Hazardous combustion products

Combustion products may include the following:
 carbon oxides (CO, CO₂) (carbon monoxide, carbon dioxide)
 metal oxide/oxides
 nitrogen oxides (NO, NO₂ etc.)
 sulphur oxides (SO, SO₂, etc.)

5.3 Advice for firefighters**Special precautions for fire-fighters**

No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.

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).

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

Not suitable	Prolonged exposure to elevated temperature
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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.

7.3 Specific end use(s)

Recommendations	See section 1.2 and Exposure scenarios in annex, if applicable.
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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
Petroleum resins	National institute of occupational safety and health (Spain). TWA: 0.5 mg/m³ 8 hours. Issued/Revised: 1/2004 Form: fume, aerosols
Distillates (petroleum), hydrotreated heavy naphthenic	National institute of occupational safety and health (Spain). [Refined mineral oil] TWA: 5 mg/m³ 8 hours. Issued/Revised: 1/2008 Form: Mist STEL: 10 mg/m³ 15 minutes. Issued/Revised: 1/2008 Form: Mist
Graphite	National institute of occupational safety and health (Spain). TWA: 2 mg/m³ 8 hours. Issued/Revised: 1/2016 Form: Respirable dust
Distillates (petroleum), hydrotreated heavy paraffinic	National institute of occupational safety and health (Spain). [Refined mineral oil] TWA: 5 mg/m³ 8 hours. Issued/Revised: 1/2008 Form: Mist STEL: 10 mg/m³ 15 minutes. Issued/Revised: 1/2008 Form: Mist
Residual oils (petroleum), solvent-dewaxed	National institute of occupational safety and health (Spain). [Refined mineral oil] TWA: 5 mg/m³ 8 hours. Issued/Revised: 1/2008 Form: Mist STEL: 10 mg/m³ 15 minutes. Issued/Revised: 1/2008 Form: Mist
Distillates (petroleum), solvent-dewaxed heavy paraffinic	National institute of occupational safety and health (Spain). [Refined mineral oil] TWA: 5 mg/m³ 8 hours. Issued/Revised: 1/2008 Form: Mist STEL: 10 mg/m³ 15 minutes. Issued/Revised: 1/2008 Form: Mist
Carbon black	National institute of occupational safety and health (Spain). TWA: 3.5 mg/m³ 8 hours. Issued/Revised: 7/2001 Form: Fume
Molybdenum disulphide	National institute of occupational safety and health (Spain). [Compounds of molybdenum, insoluble] TWA: 10 mg/m³, (as Mo) 8 hours. Issued/Revised: 2/2011 Form: Inhalable fraction TWA: 3 mg/m³, (as Mo) 8 hours. Issued/Revised: 1/2015 Form: Respirable fraction

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

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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.

Derived No Effect Level

No DNELs/DMELs available.

Predicted No Effect Concentration

No PNECs available

8.2 Exposure controls**Appropriate engineering controls**

Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits.

All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained.

Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards. The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

Individual protection measures**Hygiene measures**

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

For protection against metal working fluids, respiratory protection that is classified as "resistant to oil" (class R) or oil proof (class P) should be selected where appropriate. Depending on the level of airborne contaminants, an air-purifying, half-mask respirator (with HEPA filter) including disposable (P- or R-series) (for oil mists less than 50mg/m³), or any powered, air-purifying respirator equipped with hood or helmet and HEPA filter (for oil mists less than 125 mg/m³). Where organic vapours are a potential hazard during metalworking operations, a combination particulate and organic vapour filter may be necessary.

The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures 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

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SECTION 8: Exposure controls/personal protection

is important when following breakthrough time recommendations that actual workplace conditions are taken into account. Always consult with your glove supplier for up-to-date technical information on breakthrough times for the recommended glove type. Our recommendations on the selection of gloves are as follows:

Continuous contact:

Gloves with a minimum breakthrough time of 240 minutes, or >480 minutes if suitable gloves can be obtained.
If suitable gloves are not available to offer that level of protection, gloves with shorter breakthrough times may be acceptable as long as appropriate glove maintenance and replacement regimes are determined and adhered to.

Short-term / splash protection:

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

Glove Thickness:

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

It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.
Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers' technical data should always be taken into account to ensure selection of the most appropriate glove for the task.

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

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

Skin and body

Use of protective clothing is good industrial practice.
Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a 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	Black. [Dark]																			
Odour	Not available.																			
Odour threshold	Not available.																			
pH	Not applicable.																			
Melting point/freezing point	Not available.																			
Initial boiling point and boiling range	Not available.																			
Flash point	Open cup: 208°C (406.4°F) [Estimated. Based on Lubricants - Base Oils]																			
Flammability	Not available.																			
Lower and upper explosion limit	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></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							
Ingredient name	Vapour Pressure at 20°C		Vapour pressure at 50°C																	
	mm Hg	kPa	Method	mm Hg	kPa	Method														
Relative vapour density	Not applicable.																			
Density and/or Relative density	Not available.																			
Density and/or Relative density	>1000 kg/m³ (>1 g/cm³) at 20°C																			
Solubility																				
Media	Result																			
water	Not soluble																			

Partition coefficient n-octanol/ water (log value)	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not available.
Kinematic viscosity	Not available.
Penetration Number (0.1 mm)	345 to 360 at 25°C

Particle characteristics

Median particle size	Not available.
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9.2 Other information

Evaporation rate	Not available.
Explosive properties	Not available.
Oxidising properties	Not available.

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.

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SECTION 11: Toxicological information**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**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)
(Z)-N-9-octadecenylpropane-1,3-diamine	500	N/A	N/A	N/A	N/A

Information on likely routes of exposure

Routes of entry anticipated: Dermal, Inhalation, Eyes.

Potential acute health effectsInhalation

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 characteristicsInhalation

No specific data.

Ingestion

No specific data.

Skin contactAdverse symptoms may include the following:
irritation
redness
dryness
crackingEye contact

No specific data.

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

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 effectsGeneral

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**

Not available.

Remarks - Endocrine disruptor - Health

Not available.

11.2.2 Other information

Not available.

SECTION 12: Ecological information**12.1 Toxicity**Environmental hazards

Not classified as dangerous

12.2 Persistence and degradability

Not expected to be rapidly degradable.

12.3 Bioaccumulative potential

Not available.

12.4 Mobility in soilSoil/water partition coefficient (K_{oc})

Not available.

Mobility

Grease. insoluble in water.

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SECTION 12: Ecological information**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.

Remarks - Endocrine disruptor - Environment 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

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.

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SECTION 14: Transport information

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.

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

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

Not applicable.

Other regulations

REACH Status

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

United States inventory (TSCA 8b)

All components are active or exempted.

Australia inventory (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)

All components are listed or exempted.

Philippines inventory (PICCS)

At least one component is not listed.

Taiwan Chemical Substances Inventory (TCSI)

Not determined.

Ozone depleting substances (1005/2009/EU)

Not listed.

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

Not listed.

Persistent Organic Pollutants

Not listed.

EU - Water framework directive - Priority substances

None of the components are listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

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

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SECTION 16: Other information

CSR = Chemical Safety Report
 DMEL = Derived Minimal Effect Level
 DNEL = Derived No Effect Level
 EINECS = European Inventory of Existing Commercial chemical Substances
 ES = Exposure Scenario
 EUH statement = CLP-specific Hazard statement
 EWC = European Waste Catalogue
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC = Intermediate Bulk Container
 IMDG = International Maritime Dangerous Goods
 LogPow = logarithm of the octanol/water partition coefficient
 MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
 OECD = Organisation for Economic Co-operation and Development
 PBT = Persistent, Bioaccumulative and Toxic
 PNEC = Predicted No Effect Concentration
 REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006]
 RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
 RRN = REACH Registration Number
 SADT = Self-Accelerating Decomposition Temperature
 SVHC = Substances of Very High Concern
 STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
 STOT-SE = Specific Target Organ Toxicity - Single Exposure
 TWA = Time weighted average
 UN = United Nations
 UVCB = Complex hydrocarbon substance
 VOC = Volatile Organic Compound
 vPvB = Very Persistent and Very Bioaccumulative
 Varies = may contain one or more of the following 64741-88-4 / RRN 01-2119488706-23, 64741-89-5 / RRN 01-2119487067-30, 64741-95-3 / RRN 01-2119487081-40, 64741-96-4 / RRN 01-2119483621-38, 64742-01-4 / RRN 01-2119488707-21, 64742-44-5 / RRN 01-2119985177-24, 64742-45-6, 64742-52-5 / RRN 01-2119467170-45, 64742-53-6 / RRN 01-2119480375-34, 64742-54-7 / RRN 01-2119484627-25, 64742-55-8 / RRN 01-2119487077-29, 64742-56-9 / RRN 01-2119480132-48, 64742-57-0 / RRN 01-2119489287-22, 64742-58-1, 64742-62-7 / RRN 01-2119480472-38, 64742-63-8, 64742-65-0 / RRN 01-2119471299-27, 64742-70-7 / RRN 01-2119487080-42, 72623-85-9 / RRN 01-2119555262-43, 72623-86-0 / RRN 01-2119474878-16, 72623-87-1 / RRN 01-2119474889-13

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.
 H314 Causes severe skin burns and eye damage.
 H317 May cause an allergic skin reaction.
 H318 Causes serious eye damage.
 H372 Causes damage to organs through prolonged or repeated exposure.
 H400 Very toxic to aquatic life.
 H410 Very toxic to aquatic life with long lasting effects.
 H411 Toxic to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS]

Acute Tox. 4 ACUTE TOXICITY - Category 4
 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 Dam. 1 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
 Skin Corr. 1B SKIN CORROSION/IRRITATION - Category 1B
 Skin Sens. 1B SKIN SENSITISATION - Category 1B
 STOT RE 1 SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1

History

Date of issue/ Date of revision 30/08/2023.
Date of previous issue 10/11/2022.
Prepared by Product Stewardship

✔ Indicates information that has changed from previously issued version.

Notice to reader

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SECTION 16: Other information

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

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

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

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Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition	Mixture
Code	468617-DE03
Product name	Molub-Alloy OG 936 SF Heavy

Section 1: Title

Short title of the exposure scenario	Use of lubricants and greases in open systems - Industrial
List of use descriptors	Identified use name: Use of lubricants and greases in open systems-Industrial Process Category: PROC01, PROC02, PROC07, PROC08b, PROC09, PROC10, PROC13 Sector of end use: SU03 Subsequent service life relevant for that use: No. Environmental Release Category: ERC04 Specific Environmental Release Category: ATIEL-ATC SPERC 4.Ci.v1

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

The following information provides minimum risk management measures for the contributing scenarios identified within this lubricant use group. However, more detailed information on control measures e.g. specific glove types may be documented in Section 8 of the main body of this safety data sheet.
Please review Section 8 in conjunction with the information on this Generic Exposure Scenario.

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. Other skin protection measures such as impervious suits and face shields may be required during high dispersion activities which are likely to lead to substantial aerosol release, e.g. spraying.

Material transfers Manual:

Avoid carrying out activities involving exposure for more than 1 hour per day.

Material transfers Automated process with (semi) closed systems:

Ensure material transfers are under containment or extract ventilation.

Roller, spreader, flow application:

Provide extract ventilation to points where emissions occur.

Spraying:

Carry out in a vented booth or extracted enclosure.

Treatment by dipping and pouring:

Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Wear chemical-resistant gloves (tested to EN374) in combination with specific activity training.

Molub-Alloy OG 936 SF Heavy

Use of lubricants and greases in open systems - Industrial

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.

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

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	468617-DE03
Product name	Molub-Alloy OG 936 SF Heavy

Section 1: Title

Short title of the exposure scenario	Use of lubricants and greases in open systems - Professional
List of use descriptors	Identified use name: Use of lubricants and greases in open systems-Professional Process Category: PROC01, PROC02, PROC08a, PROC10, PROC11, PROC13 Sector of end use: SU22 Subsequent service life relevant for that use: No. Environmental Release Category: ERC08a, ERC08d Specific Environmental Release Category: ATIEL-ATC SPERC 8.Cp.v1

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

Material transfers Manual:

Avoid carrying out activities involving exposure for more than 1 hour per day.

Roller, spreader, flow application:

Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. 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.

Spraying:

Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. Avoid carrying out activities involving exposure for more than 1 hour per day. Wear a respirator conforming to EN140 with type A/P2 filter or better. Wear suitable coveralls to prevent exposure to the skin. Wear chemical-resistant gloves (tested to EN374) in combination with specific activity training.

Treatment by dipping and pouring:

Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan.

Equipment cleaning and maintenance:

Drain down system prior to equipment break-in or maintenance. Natural ventilation is from doors, windows etc. Controlled ventilation means air is supplied or removed by a powered fan. Avoid carrying out activities involving exposure for more than 4 hours per day. Retain drain-downs in sealed storage pending disposal or for subsequent

Molub-Alloy OG 936 SF Heavy

Use of lubricants and greases in open systems - Professional

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

Health

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