

ASO Oil Reinforcement

Molybdenum disulphide oil reinforcement for non-EP mineral oils

Product Overview

ROCOL® ASO Oil Reinforcement is an oil concentrate containing extremely fine particles of molybdenum disulphide for addition to all types of basic mineral oils to form a stable suspension of molybdenum disulphide reinforced oil.

ROCOL ASO Oil Reinforcement can be added to mineral oils already in use in gearboxes, bearings and compressors to reinforce the base oil against overload, shock loading etc...

ROCOL ASO Oil Reinforcement can help to prolong the life of an ailing gearbox until replacement or repair can be planned in to a maintenance schedule.

Features and Benefits

- ROCOL ASO Oil Reinforcement is economical in use as only a 5% to 10% dilution is required.
- The molybdenum disulphide in ASO increases the load carrying and wear resistance properties of the existing mineral oil.
- ROCOL ASO Oil Reinforcement protects during initial start up where the majority of gearbox wear occurs.
- ROCOL ASO Oil Reinforcement is miscible with all types of mineral oil and raises the performance level of straight, non EP mineral gearbox oils.
- ROCOL ASO Oil Reinforcement does not affect viscosity of base oil already in use.

Directions for Storage and Use

- ROCOL ASO Oil Reinforcement has been specifically balanced to provide maximum benefit with only a 10% addition.
- ROCOL ASO Oil Reinforcement is a medium viscosity oil and it does not affect the viscosity of the base oil already in use.
- For best results use ROCOL ASO Oil Reinforcement in the correct dilution by adding it to a gearbox already containing a straight non-EP mineral oil.
- The storage temperature should be kept below +50°C, and the storage area should be out of direct sunlight.
- Shelf life is 2 years from date of manufacture.

Typical Applications

- ROCOL ASO Oil Reinforcement can be added to mineral oils already in use in gearboxes, bearings and compressors to reinforce the base oil against overload, shock loading etc...
- ROCOL ASO Oil Reinforcement is also used in oil filled switchgear.

Pack Sizes

Pack Size	Part Code
5L	16016

ASO Oil Reinforcement

Molybdenum disulphide oil reinforcement for non-EP mineral oils

Property	Test Method	Result
Appearance	Visual	Oily blue/black liquid
Base Fluid	N/A	Severely refined mineral oil
Base Fluid Viscosity at 40°C	IP 71	109cSt
Base Fluid Viscosity at 100°C	IP 71	9cSt
Viscosity Index	IP 226	70
Solids	N/A	Molybdenum disulphide
Solids Particle Size	N/A	Average 0.5 micron
Solids Content	N/A	3% by weight
Dilution Rate (approximately)	N/A	10% ASO to 90% mineral oil

Values quoted above are typical and do not constitute a specification.

Safety Data Sheets

Safety data sheets are available for download from our website www.rocol.com or may be obtained from your usual ROCOL contact.

The information in this publication is based on our experience and reports from customers. There are many factors outside our control or knowledge which affect the use and performance of our products, for which reason it is given without responsibility.

Issue: 1 Date: 01-11

T +44 (0) 113 232 2600
 F +44 (0) 113 232 2740
 E customer-service@rocol.com
www.rocol.com

ROCOL House, Swillington, Leeds LS26 8BS

Registered Company No. 559693 VAT No. 742 0531 67
 Registered Office: Admiral House, St Leonard's Road, Windsor, Berkshire SL4 3BL

ROCOL A division of *ITW* Ltd



BS EN ISO 9001
 Certificate No. FM 12448



BS EN ISO 14001
 Certificate No. EMS 67596



OHSAS 18001
 Certificate No. OHS 78173



INVESTORS
 IN PEOPLE



SAFETY DATA SHEET
ASO OIL REINFORCEMENT

Page: 1

Compilation date: 06/02/2012

Revision No: 4

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

1.1. Product identifier

Product name: ASO OIL REINFORCEMENT

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

Use of substance / mixture: Oil Lubrication Additive

1.3. Details of the supplier of the safety data sheet

Company name: ROCOL

ROCOL House

Swillington

Leeds

West Yorkshire

LS26 8BS

ENGLAND

Tel: +44 (0) 113 232 2700

Fax: +44 (0) 113 232 2740

Email: customer-service@rocol.com

1.4. Emergency telephone number

Emergency tel: +44 (0) 113 232 2600

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CHIP: This product has no classification under CHIP.

2.2. Label elements

Label elements under CHIP:

Hazard symbols: No significant hazard.

2.3. Other hazards

PBT: This substance is not identified as a PBT substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

[cont...]

SAFETY DATA SHEET
ASO OIL REINFORCEMENT

Page: 2

Hazardous ingredients:

SOLVENT REFINED BASE OIL (LESS THAN 3% DMSO)

EINECS	CAS	CHIP Classification	CLP Classification	Percent
265-101-6	64742-01-4	Substance with a Community workplace exposure limit.	-	>90%

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Wash immediately with plenty of soap and water.

Eye contact: Bathe the eye with running water for 15 minutes.

Ingestion: Wash out mouth with water. Do not induce vomiting.

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

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat.

Inhalation: No symptoms.

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

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Use water spray to cool containers. Alcohol or polymer foam. Dry chemical powder.
Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: In combustion emits toxic fumes of carbon dioxide / carbon monoxide.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Refer to section 8 of SDS for personal protection details.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

[cont...]

SAFETY DATA SHEET

ASO OIL REINFORCEMENT

Page: 3

6.4. Reference to other sections

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Avoid direct contact with the substance.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in cool, well ventilated area. Keep away from direct sunlight.

Suitable packaging: Must only be kept in original packaging.

7.3. Specific end use(s)

Section 8: Exposure controls/personal protection

8.1. Control parameters

Hazardous ingredients:

SOLVENT REFINED BASE OIL (LESS THAN 3% DMSO)

Workplace exposure limits:

Respirable dust

State	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
UK	5mg/m ³	10mg/m ³	-	-

8.2. Exposure controls

Respiratory protection: Respiratory protection not normally required.

Hand protection: Protective gloves.

Eye protection: Safety glasses with side-shields.

Skin protection: Protective clothing.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid

Colour: Black

Odour: Barely perceptible odour

Evaporation rate: Negligible

Oxidising: Non-oxidising (by EC criteria)

Solubility in water: Insoluble

Viscosity: Oily

Flash point°C: > 150

Autoflammability°C: > 150

Relative density: 0.9

9.2. Other information

Other information: Not applicable.

[cont...]

SAFETY DATA SHEET
ASO OIL REINFORCEMENT

Page: 4

Section 10: Stability and reactivity

10.1. Reactivity

10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

10.4. Conditions to avoid

Conditions to avoid: Heat. Direct sunlight.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong reducing agents.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes of carbon dioxide / carbon monoxide.

Section 11: Toxicological information

11.1. Information on toxicological effects

Toxicity values: Not applicable.

Symptoms / routes of exposure

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat.

Inhalation: No symptoms.

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity values: Not applicable.

12.2. Persistence and degradability

Persistence and degradability: Only slightly biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: No bioaccumulation potential.

12.4. Mobility in soil

Mobility: Non-volatile. Insoluble in water. Readily absorbed into soil.

12.5. Results of PBT and vPvB assessment

PBT identification: This substance is not identified as a PBT substance.

[cont...]

SAFETY DATA SHEET
ASO OIL REINFORCEMENT

Page: 5

12.6. Other adverse effects

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal of packaging: Dispose of in a regulated landfill site or other method for hazardous or toxic wastes.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

Transport class: This product does not require a classification for transport.

Section 15: Regulatory information

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

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

Compiled in accordance with REACH.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.