



SAFETY DATA SHEET

Issuing Date 06-Feb-2015

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Revision Number 0

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

1.1. Product identifier

Product Code(s) 102

Product Name KOPR KOTE® THERMAL

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

Recommended Use Lubricants, Greases and Release Products

Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Importer

Jet-Lube (UK) Ltd
Jet-Lube House
Reform Road
Maidenhead
Berkshire UK
SL6 8BY
TEL: 44 1628-631913 (8:00 a.m. - 5:00 p.m.)

Company

Jet-Lube, Inc.
4849 Homestead Rd.
Suite 232
Houston, Texas 77028
TEL: 713-670-5700 (7:00 a.m. - 5 p.m.)

For further information, please contact

E-mail Address doldiges@jetlube.com

1.4. Emergency telephone number

Emergency Telephone Number CHEMTREC: +1-703-527-3887 (INTERNATIONAL)
1-800-424-9300 (NORTH AMERICA)

Europe 112

Section 2. Hazards identification

2.1. - Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2

Physical Hazards

None

Classification according to EU Directives 67/548/EEC or 1999/45/EC

The preparation is classified as dangerous in accordance with Directive 1999/45/EC.

Symbol(s) None

R-code(s) R53

For the full text of the R-phrases mentioned in this Section, see Section 16

2.2. Label Elements

**Signal Word****Warning****Hazard Statements**

H315 - Causes skin irritation

H319 - Causes serious eye irritation

Precautionary Statements

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P332 + P313 - If skin irritation occurs: Get medical advice/ attention

P264 - Wash face, hands and any exposed skin thoroughly after handling

P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P337 + P313 - If eye irritation persists: Get medical advice/ attention

2.3. Other information

None known

Section 3. Composition/information on ingredients

3.1. Substances

Chemical Name	EC-No	CAS-No	Weight %	Classification	EU - GHS Substance Classification	REACH No.
Graphite	231-955-3	7782-42-5	10-15	-		No data available
Copper	231-159-6	7440-50-8	8-13	Xi;R36/37/38 N;R50-53	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) STOT SE 3 (H335) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	No data available
Talc	238-877-9	14807-96-6	1-5	-		No data available
Limestone	215-279-6	1317-65-3	1-5	-		No data available
Molybdenum (IV) sulfide	215-263-9	1317-33-5	1-5	-		No data available

For the full text of the R-phrases mentioned in this Section, see Section 16

For the full text of the H-Statements mentioned in this Section, see Section 16

Note

The full refining history is known for this product and it can be shown that the substance from which it is produced is not a carcinogen. This note applies only to certain complex oil derived substances in Annex I.

Section 4. First aid measures

4.1. Description of first-aid measures**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician.

Skin Contact	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. If skin irritation persists, call a physician.
Ingestion	Clean mouth with water and afterwards drink plenty of water. Do not induce vomiting without medical advice. If symptoms persist, call a physician.
Inhalation	Move to fresh air. If symptoms persist, call a physician.

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

Most Important Symptoms/Effects Eye irritation/reactions. Skin irritation.

4.3. Indication of immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

Section 5. Fire-fighting measures

5.1. Extinguishing media

Suitable Extinguishing Media

Dry powder. Carbon dioxide (CO₂). Foam. Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Extinguishing media which must not be used for safety reasons

Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases

Burning produces obnoxious and toxic fumes. Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke). Heavy metal compounds.

5.3. Advice for firefighters

Special protective equipment for fire-fighters

As in any fire, wear self-contained breathing apparatus and full protective gear.

Section 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes and clothing. Use personal protective equipment.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

6.3. Methods and materials for containment and cleaning up

Take up mechanically and collect in suitable container for disposal.

6.4. Reference to other sections

See Section 12 for additional information.

Section 7. Handling and storage

7.1. Precautions for Safe Handling

Handling

Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Ensure adequate ventilation.

Hygiene Measures

When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use.

7.2. Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Keep in a banded area

7.3. Specific end use(s)**Exposure Scenario**

No information available.

Other Guidelines

No information available.

Section 8. Exposure controls/personal protection**8.1. Control parameters****Exposure Limits**

Chemical Name	EU	The United Kingdom	France	Spain	Germany
Graphite 7782-42-5		STEL: 30 mg/m ³ STEL: 12 mg/m ³ TWA: 10 mg/m ³ TWA: 4 mg/m ³	VME: 2 mg/m ³	VLA-ED: 2 mg/m ³	MAK: 1.5 mg/m ³ MAK: 4 mg/m ³
Copper 7440-50-8		STEL: 0.6 mg/m ³ STEL: 2 mg/m ³ TWA: 0.2 mg/m ³ TWA: 1 mg/m ³	VME: 0.2 mg/m ³ VME: 1 mg/m ³ VLCT: 2 mg/m ³	VLA-ED: 0.2 mg/m ³ VLA-ED: 1 mg/m ³	MAK: 0.1 mg/m ³ Ceiling / Peak: 0.2 mg/m ³
Talc 14807-96-6		STEL: 3 mg/m ³ TWA: 1 mg/m ³		TWA: 2 mg/m ³	
Limestone 1317-65-3		STEL: 30 mg/m ³ STEL: 12 mg/m ³ TWA: 10 mg/m ³ TWA: 4 mg/m ³			
Molybdenum (IV) sulfide 1317-33-5		TWA: 10 mg/m ³		VLA-ED: 10 mg/m ³ VLA-ED: 3 mg/m ³	
Component	Italy	Portugal	The Netherlands	Finland	Denmark
Graphite 7782-42-5 (10-15)		TWA: 2 mg/m ³		TWA: 2 mg/m ³	TWA: 2.5 mg/m ³
Copper 7440-50-8 (8-13)		TWA: 0.2 mg/m ³ TWA: 1 mg/m ³	TWA: 0.1 mg/m ³	TWA: 1 mg/m ³ TWA: 0.1 mg/m ³	TWA: 1.0 mg/m ³ TWA: 0.1 mg/m ³
Talc 14807-96-6 (1-5)		TWA: 2 mg/m ³	TWA: 0.25 mg/m ³	TWA: 0.5 fiber/cm ³ TWA: 5 mg/m ³	TWA: 0.3 fiber/cm ³
Molybdenum (IV) sulfide 1317-33-5 (1-5)		TWA: 10 mg/m ³ TWA: 3 mg/m ³			TWA: 10 mg/m ³
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
Graphite 7782-42-5	STEL 10 mg/m ³ MAK: 5 mg/m ³	MAK: 2.5 mg/m ³ MAK: 5 mg/m ³	NDS: 4.0 mg/m ³ NDS: 1.0 mg/m ³ NDS: 6.0 mg/m ³	TWA: 5 mg/m ³ TWA: 2 mg/m ³ TWA: 10 mg/m ³ TWA: 4 mg/m ³ STEL: 10 mg/m ³ STEL: 4 mg/m ³ STEL: 20 mg/m ³ STEL: 8 mg/m ³	TWA: 10 mg/m ³ TWA: 4 mg/m ³
Copper 7440-50-8	STEL 4 mg/m ³ STEL 0.4 mg/m ³ MAK: 1 mg/m ³ MAK: 0.1 mg/m ³	STEL: 0.2 mg/m ³ MAK: 0.1 mg/m ³	NDS: 0.2 mg/m ³	TWA: 0.1 mg/m ³ TWA: 1 mg/m ³ STEL: 0.3 mg/m ³ STEL: 3 mg/m ³	TWA: 0.2 mg/m ³ TWA: 1 mg/m ³ STEL: 2 mg/m ³
Talc 14807-96-6	TWA: 2 mg/m ³	TWA: 2 mg/m ³	TWA: 4.0 mg/m ³ TWA: 1.0 mg/m ³	TWA: 6 mg/m ³ TWA: 2 mg/m ³ STEL: 12 mg/m ³ STEL: 4 mg/m ³	TWA: 10 mg/m ³ TWA: 0.8 mg/m ³
Limestone 1317-65-3		MAK: 3 mg/m ³			TWA: 10 mg/m ³ TWA: 4 mg/m ³
Molybdenum (IV) sulfide 1317-33-5	STEL 20 mg/m ³ MAK: 10 mg/m ³	MAK: 10 mg/m ³	NDSCh: 10 mg/m ³ NDS: 4 mg/m ³	TWA: 10 mg/m ³ STEL: 20 mg/m ³	TWA: 3 mg/m ³ TWA: 0.5 mg/m ³

Derived No Effect Level No information available
Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering Measures Ensure adequate ventilation, especially in confined areas.
Personal protective equipment
Eye Protection Safety glasses with side-shields.
Skin and Body Protection Long sleeved clothing.
Hand Protection Protective gloves.
Respiratory Protection None required under normal usage. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

Environmental Exposure Controls Local authorities should be advised if significant spillages cannot be contained. Do not allow material to contaminate ground water system. Prevent product from entering drains.

Section 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State	Gel.	Appearance	Copper Bronze
Odor	Petroleum like.		

<u>Property</u>	<u>Values</u>	<u>Remarks/ - Method</u>
pH	Neutral	None known
Melting Point/Range	> 315 °C	None known
Boiling Point/Boiling Range	< 316 °C	None known
Flash Point	> 310 °C	Open cup
Evaporation rate	< 0.01	None known
Flammability (solid, gas)	No data available	None known
Vapor Pressure	<0.01 kPa @ 20°C	None known
Vapor Density	>5 (air = 1)	None known
Relative Density	1.15	None known
Water Solubility	Insoluble in water.	None known
Solubility in other solvents	Soluble	None known
Partition coefficient: n-octanol/water	No data available	None known
Autoignition Temperature	>315 °C / >500 °F	None known
Decomposition Temperature	No data available	None known
Viscosity	No data available	None known
Flammable Properties	Containers may explode when heated.	
Explosive Properties	No information available	
Oxidizing Properties	No information available	

9.2. Other information

VOC Content (%)	None
Flammability Limits in Air	No information available.
Upper	7%
Lower	0.9%

Section 10. Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None under normal processing.

10.4. Conditions to avoid

Heat, flames and sparks.

10.5. Incompatible materials

Strong oxidizing agents. Acetylene. Vinyl compounds.

10.6. Hazardous decomposition products

None under normal use.

Section 11. Toxicological information
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11.1.**Acute Toxicity****Product Information**

Product does not present an acute toxicity hazard based on known or supplied information.

Inhalation

None known.

Eye Contact

Causes serious eye irritation.

Skin Contact

Causes skin irritation.

Ingestion

Not an expected route of exposure. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Molybdenum (IV) sulfide			> 2820 mg/m ³ (Rat) 4 h

Sensitization

None known.

Mutagenic Effects

None known.

Carcinogenic Effects

None known.

Reproductive Toxicity

None known.

Developmental Toxicity

None known.

STOT - single exposure

None known

STOT - repeated exposure

May cause disorder and damage to the: Liver

Target Organ Effects

Central vascular system (CVS). Eyes. Kidney. Liver. Respiratory system. Skin.

Aspiration Hazard

Not applicable

Section 12. Ecological information

12.1. Toxicity**Ecotoxicity Effects**

May cause long-term adverse effects in the aquatic environment. Lc50/48h/Acartia tonsa = >1000 mg/L. EC50/72h/Skeletonema costatum = >1000 mg/L. LC50/96h/Scophthalmus maximus = >1000 mg/L. Aquatic toxicity is unlikely due to low solubility. Sea sediment LC50/10d/Corophium sp. = 925- 3502 mg/kg.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)

Copper	EC50 96 h: 0.031 - 0.054 mg/L static (Pseudokirchneriella subcapitata) EC50 72 h: 0.0426 - 0.0535 mg/L static (Pseudokirchneriella subcapitata)	LC50 96 h: 0.0068 - 0.0156 mg/L (Pimephales promelas) LC50 96 h: < 0.3 mg/L static (Pimephales promelas) LC50 96 h: = 0.052 mg/L flow-through (Oncorhynchus mykiss) LC50 96 h: = 0.112 mg/L flow-through (Poecilia reticulata) LC50 96 h: = 0.2 mg/L flow-through (Pimephales promelas) LC50 96 h: = 0.3 mg/L semi-static (Cyprinus carpio) LC50 96 h: = 0.8 mg/L static (Cyprinus carpio) LC50 96 h: = 1.25 mg/L static (Lepomis macrochirus)	-	EC50 48 h: = 0.03 mg/L Static (Daphnia magna)
Talc		LC50 96 h: > 100 g/L semi-static (Brachydanio rerio)		

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential.

No information available.

12.4. Mobility in soil

Adsorbs on soil.

12.5. Results of PBT and vPvB assessment

No information available.

12.6. Other adverse effects

This product does not contain any known or suspected endocrine disruptors.

Section 13. Disposal considerations

13.1. Waste treatment methods

Waste from Residues / Unused Products

Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations

Contaminated Packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal.

Other Information

According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

Section 14. Transport information

IMDG/IMO

14.1. UN-Number	Not regulated.
14.2. Proper Shipping Name	Not regulated.
14.3. Hazard Class	Not regulated.
14.4. Packing Group	Not regulated.
Description	Not applicable.
14.5. Marine Pollutant	None.
14.6. Special Provisions	None.
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	No information available.

RID

14.1. UN-Number	Not regulated.
14.2. Proper Shipping Name	Not regulated.
14.3. Hazard Class	Not regulated.
14.4. Packing Group	Not regulated.
Description	Not applicable.
14.5. Environmental hazard	None.
14.6. Special Provisions	None.

ADR

14.1. UN-Number	Not regulated.
14.2. Proper Shipping Name	Not regulated.
14.3. Hazard Class	Not regulated.
14.4. Packing Group	Not regulated.
Description	Not applicable.
14.5. Environmental hazard	None.
14.6. Special Provisions	None.

ICAO

14.1. UN-Number	Not regulated.
14.2. Proper shipping name	Not regulated.
14.3. Hazard Class	Not regulated.
14.4. Packing Group	Not regulated.
Description	Not applicable.
14.5. Environmental hazard	None.
14.6. Special Provisions	None.

IATA

14.1. UN-Number	Not regulated.
14.2. Proper Shipping Name	Not regulated.
14.3. Hazard Class	Not regulated.
14.4. Packing Group	Not regulated.
Description	Not applicable.
14.5. Environmental hazard	None.
14.6. Special Provisions	None.

Section 15. Regulatory information

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

WGK Classification Water endangering class = 1

International Inventories

TSCA	Not determined
EINECS/ELINCS	Complies
DSL/NDSL	Not determined
PICCS	Complies

ENCS	Not determined
IECSC	Complies
AICS	Not determined
KECL	Not determined

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

PICCS - Philippines Inventory of Chemicals and Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

AICS - Australian Inventory of Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

15.2. Chemical Safety Assessment

No information available

Section 16. Other information**Full text of R-phrases referred to under Sections 2 and 3**

R53 - May cause long-term adverse effects in the aquatic environment

R36/37/38 - Irritating to eyes, respiratory system and skin

R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Full text of H-Statements referred to under sections 2 and 3

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H335 - May cause respiratory irritation

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

Key literature references and sources for data

www.ChemADVISOR.com/

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Revision Note Initial Release.

This safety data sheet complies with the requirements of Commission Regulation (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No. 1907/2006

General Disclaimer

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Safety Data Sheet