

Safety data sheet

according to 1907/2006/EC, 1272/2008/EC & 2020/878/EC

Printing date 10.09.2024

Version number 6

Revision: 22.04.2025

Trade name: MULTI ROD COPPER

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier****Trade name: MULTI ROD COPPER****1.2. Relevant identified uses of the substance or mixture and uses advised against****Recommended use** Lubricating grease.**Uses advised against** No information available.**1.3. Details of the supplier of the safety data sheet**

Manufacturer

Oryx Energies

12 rue Michel Servet

CH-1211 GENÈVE 12

SUISSE

Email: lubes@oryxenergies.com

1.4. Emergency telephone number

France (INRS 24h/24) - Tel : +33 (0)1 45 42 59 59

Ireland - Tel : 00 353 1 8092568 - 00 353 1 8379964 (24h/24) EU Tel: 112

Belgium - Brüssel: +32 070/245 245

UK : Call NHS 999 in a medical emergency. If you urgently need medical help or advice but it's not a lifethreatening situation, call 111 (24/7). The NHS 111 number is currently only available in certain areas. If you're outside of these areas, you should call NHS Direct on 0845 4647

Swiss Toxicological Information Centre (Zürich) : +41 44 251 51 51 / www.toxi.ch.

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008****Acute aquatic toxicity** Category 1 - (H400)**Chronic aquatic toxicity** Category 1 - (H410)**2.2. Label elements****Signal word**

Warning

Hazard statements

H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements - EU (§28, 1272/2008)

P273 - Avoid release to the environment

P391 - Collect spillage

P501 - Dispose of contents/ container to an approved waste disposal plant

2.3. Other hazards

The components in this formulation do not meet the criteria for classification as PBT or vPvB. This product does not contain any known or suspected endocrine disruptors.

SECTION 3: Composition/information on ingredients**3.1 Substances** Not applicable.**3.2 Mixtures****Chemical name** Copper flakes

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Trade name: MULTI ROD COPPER

Weight-% <10

REACH registration number 01-2119480154-42

CAS No 7440-50-8

EC No (EU Index No) 231-159-6

Classification according to Regulation (EC) No. 1272/2008 [CLP] Acute Tox. 3 (H331) Acute Tox. 4 (H302) Eye Irrit. 2 (H319) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)

Specific concentration limit (SCL) - M-Factor 10

M-Factor (long-term) 10

Ingredient comments This product is a clay thickened lubricating grease based on mineral oil with additives. The mineral oils in the product contain <3% DMSO-extract (IP 346).

Full text of H- and EUH-phrases: see section 16

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance.

Inhalation Move to fresh air in case of accidental inhalation of vapours.

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids.

Consult a doctor.

Skin contact Wash skin with soap and water. In the case of skin irritation or allergic reactions see a doctor. **Ingestion** Rinse mouth. Do not induce vomiting without medical advice. Get medical attention if symptoms occur.

Self-protection of the first aider No information available.

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

Symptoms No information available.

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

Note to doctors Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. CO₂, dry chemical, dry sand, alcohol-resistant foam.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

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

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical Fire may produce irritating, corrosive and/or toxic gases.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation. Extremely slippery when spilled.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

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Methods for cleaning up Take up with sand or other non-combustible absorbent material and place into containers for later disposal.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Ensure adequate ventilation. Avoid contact with eyes and prolonged or repeated contact with skin.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place. Store at temperatures not exceeding 45 °C/ 113 °F.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name Copper flakes 7440-50-8

European Union -

Austria TWA: 1 mg/m³, TWA: 0.1 mg/m³, STEL 4 mg/m³, STEL 0.4 mg/m³

Belgium TWA: 0.2 mg/m³, TWA: 1 mg/m³

Bulgaria TWA: 0.1 mg/m³

Croatia TWA: 0.2 mg/m³, TWA: 1 mg/m³, STEL: 2 mg/m³

Chemical name Copper flakes 7440-50-8

Cyprus -

Czech Republic TWA: 1 mg/m³, TWA: 0.1 mg/m³, Ceiling: 2 mg/m³, Ceiling: 0.2 mg/m³

Denmark TWA: 1.0 mg/m³, TWA: 0.1 mg/m³

Estonia TWA: 1 mg/m³, TWA: 0.2 mg/m³

Finland TWA: 0.02 mg/m³

Chemical name Copper flakes 7440-50-8

France TWA: 0.2 mg/m³, TWA: 1 mg/m³, STEL: 2 mg/m³

Germany TRGS -

Germany DFG TWA: 0.01 mg/m³, Peak: 0.02 mg/m³

Greece TWA: 0.2 mg/m³, TWA: 1 mg/m³, STEL: 2 mg/m³

Hungary TWA: 0.1 mg/m³, TWA: 0.01 mg/m³, STEL: 0.2 mg/m³

Chemical name Copper flakes 7440-50-8

Ireland TWA: 0.2 mg/m³, TWA: 1 mg/m³, STEL: 2 mg/m³, STEL: 0.6 mg/m³

Italy MDLPS -

Italy AIDII TWA: 0.2 mg/m³

Latvia TWA: 0.5 mg/m³, STEL: 1 mg/m³

Lithuania TWA: 1 mg/m³, TWA: 0.2 mg/m³

Chemical name Copper flakes 7440-50-8

Luxembourg - Malta -

Netherlands TWA: 0.1 mg/m³

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Norway TWA: 0.1 mg/m³, TWA: 1 mg/m³, STEL: 3 mg/m³, STEL: 0.3 mg/m³
Poland TWA: 0.2 mg/m³

Chemical name Copper flakes 7440-50-8

Portugal TWA: 0.2 mg/m³, TWA: 1 mg/m³

Romania TWA: 0.5 mg/m³, STEL: 0.2 mg/m³, STEL: 1.5 mg/m³

Slovakia TWA: 1 mg/m³, TWA: 0.2 mg/m³

Slovenia -

Spain TWA: 0.01 mg/m³

Chemical name Copper flakes 7440-50-8

Sweden NGV: 0.01 mg/m³

Switzerland TWA: 0.1 mg/m³, STEL: 0.2 mg/m³

United Kingdom TWA: 1 mg/m³, TWA: 0.2 mg/m³, STEL: 0.6 mg/m³, STEL: 2 mg/m³

Biological occupational exposure limits This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Engineering controls Eyewash stations. Ventilation systems.

Personal protective equipment



Hand protection Wear suitable gloves tested to EN 374. Nitrile rubber. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves.

Eye/face protection No special protective equipment required. If splashes are likely to occur, wear safety glasses with side-shields.

Skin and body protection No special protective equipment required.

Respiratory protection None under normal use conditions. In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. **Environmental exposure controls** Prevent product from entering drains.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Physical state

Liquid

· Form:

Fluid

· Colour:

Black

· Odour:

Characteristic

· Odour threshold:

Not determined.

· Melting point/freezing point:

-20 °C

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| | |
|--|---|
| · Boiling point or initial boiling point and boiling range | 1100°C |
| · Flammability | Not applicable. |
| · Lower and upper explosion limit | |
| · Lower: | Not determined. |
| · Upper: | Not determined. |
| · Flash point: | >240 °C |
| · Auto-ignition temperature: | Not applicable. |
| · Decomposition temperature: | Not determined. |
| · pH | Mixture is non-polar/aprotic. |
| · Viscosity: | |
| · Kinematic viscosity at 40 °C | 490 cSt |
| · Dynamic at -20 °C: | Not determined. |
| Solubility | |
| · water: | Not miscible. |
| · Partition coefficient n-octanol/water (log value) | Not determined. |
| · Vapour pressure: | Not determined. |
| · Density and/or relative density | |
| · Density at 15 °C: | 1.000 g/cm ³ |
| · Relative density : | Not determined. |
| · Vapour density : | Not determined. |
| · 9.2 Other information : | |
| Important information on protection of health and environment, and on safety. | |
| · Ignition temperature: | Product is not self igniting. |
| · Explosive properties: | Product does not present an explosion hazard. |
| · Solvent content: | |
| · COV (CH) : | 0.00 % |
| · Change in condition | |
| · Evaporation rate : | Not determined. |
| Information with regard to physical hazard classes | |
| · Explosives | None |
| · Flammable gases | None |
| · Aerosols | None |
| · Oxidising gases | None |
| · Gases under pressure | None |
| · Flammable liquids | None |
| · Flammable solids | None |
| · Self-reactive substances and mixtures | None |
| · Pyrophoric liquids | None |
| · Pyrophoric solids | None |
| · Self-heating substances and mixtures | None |
| · Substances and mixtures, which emit flammable gases in contact with water | None |
| · Oxidising liquids | None |
| · Oxidising solids | None |
| · Organic peroxides | None |
| · Corrosive to metals | None |
| · Desensitised explosives | None |

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SECTION 10: Stability and reactivity**10.1. Reactivity** Reactivity Stable.**10.2. Chemical stability****Stability** Stable under normal conditions.**Explosion data****Sensitivity to mechanical impact** None.**Sensitivity to static discharge** None.**10.3. Possibility of hazardous reactions****Possibility of hazardous reactions** None under normal processing.**10.4. Conditions to avoid****Conditions to avoid** Excessive heat.**10.5. Incompatible materials****Incompatible materials** Strong oxidising agents.**10.6. Hazardous decomposition products****Hazardous decomposition products** None under normal use conditions.

SECTION 11: Toxicological information**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Product Information** Product does not present an acute toxicity hazard based on known or supplied information.

Information on likely routes of exposure

Inhalation Not an expected route of exposure. Specific test data for the substance or mixture is not available.**Eye contact** Not expected to cause eye irritation.**Skin contact** Non-irritating during normal use. Prolonged or repeated contact may dry skin and cause irritation.**Ingestion** May cause gastrointestinal discomfort if consumed in large amounts. No known hazard by swallowing.**Symptoms related to the physical, chemical and toxicological characteristics****Symptoms** No information available.

Numerical measures of toxicity

Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 3.539,70 mg/kg

ATEmix (dermal) 5.192,80 mg/kg

ATEmix (inhalation-dust/mist) 6,96 mg/l

Unknown acute toxicity

0 % of the mixture consists of ingredient(s) of unknown toxicity

Component Information**Chemical name** Copper flakes**Oral LD50 - Dermal LD50 -****Inhalation LC50** > 5.11 mg/L (Rat) 4 h**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Skin corrosion/irritation** Based on available data, the classification criteria are not met.**Serious eye damage/eye irritation** Based on available data, the classification criteria are not met.**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.**Germ cell mutagenicity** Based on available data, the classification criteria are not met.**Carcinogenicity** Based on available data, the classification criteria are not met.**Reproductive toxicity** Based on available data, the classification criteria are not met.**STOT - single exposure** Based on available data, the classification criteria are not met.

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STOT - repeated exposure Based on available data, the classification criteria are not met.

Aspiration hazard Based on available data, the classification criteria are not met.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

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

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Unknown aquatic toxicity Contains 0 % of components with unknown hazards to the aquatic environment.

Chemical name Copper flakes

Algae/aquatic plants EC50: 0.0426 - 0.0535mg/L (72h, Pseudokirchneriellasubcapitata) EC50: 0.031 - 0.054mg/L (96h, Pseudokirchneriellasubcapitata)

Fish LC50: 0.0068 - 0.0156mg/L (96h, Pimephales promelas) LC50: <0.3mg/L (96h, Pimephales promelas) LC50: =0.2mg/L (96h, Pimephales promelas) LC50: =0.052mg/L (96h, Oncorhynchus mykiss) LC50:

=1.25mg/L (96h, Lepomis macrochirus) LC50: =0.3mg/L (96h, Cyprinus carpio) LC50: =0.8mg/L (96h, Cyprinus carpio) LC50: =0.112mg/L (96h, Poecilia reticulata)

Toxicity to microorganisms -

Crustacea EC50: =0.03mg/L (48h, Daphnia magna)

12.2. Persistence and degradability

Persistence and degradability Not readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulation Material does not bioaccumulate.

12.4. Mobility in soil

Mobility in soil After release, adsorbs onto soil.

Mobility Insoluble in water.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment

Chemical name Copper flakes

PBT and vPvB assessment The substance is not PBT / vPvB PBT assessment does not apply

12.6. Endocrine disrupting properties

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

12.7. Other adverse effects

Other adverse effects No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Disposal should be in accordance with applicable regional, national and local laws and regulations. Dispose of contents/container to industrial incineration plant. Should not be released into the environment. Use personal protection recommended in Section 8.

Contaminated packaging Do not reuse empty containers.

Waste codes / waste designations according to EWC 13 08 99*.

Other information Waste codes should be assigned by the user based on the application for which the product was used.

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SECTION 14: Transport information

· **14.1 UN number or ID number**

· DOT, ADR, IMDG, IATA

UN 3077

· **14.2 UN proper shipping name**

· ADR, IMDG, IATA

Environmentally hazardous substances, solid, n.o.s. (Copper flakes)

· **14.3 Transport hazard class(es)**

· ADR, ADN, IMDG, IATA

· Class

9

· **14.4 Packing group**

· ADR, IMDG, IATA

III

· **14.5 Environmental hazards:**

Yes

· **14.6 Special precautions for user**

Not applicable.

· **14.7 Maritime transport in bulk according to IMO**

instruments Not applicable.

· **UN "Model Regulation":** none

SECTION 15: Regulatory information

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

Germany

Water hazard class (WGK) slightly hazardous to water (WGK 3)

European Union Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorisations and/or restrictions on use:

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII).

Chemical name Copper flakes - 7440-50-8

Restricted substance per REACH Annex XVII Entry 75 - Tattoo inks

Substance subject to authorisation per REACH Annex XIV -

Persistent Organic Pollutants Not applicable.

Export Notification requirements Not applicable.

Dangerous substance category per Seveso Directive (2012/18/EU) E1 - Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1.

Ozone-depleting substances (ODS) regulation (EC) 1005/2009 Not applicable.

Chemical name Copper flakes - 7440-50-8

Biocidal Products Regulation (EU) No 528/2012 (BPR) Product-type 8: Wood preservatives

Product-type

21: Antifouling products

International Inventories

TSCA Complies

DSL/NDSL Complies

EINECS/ELINCS Complies

REACH Complies

ENCS Complies

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| | |
|--------------|----------|
| IECSC | Complies |
| KECL | Complies |
| PICCS | Complies |
| AIIC | Complies |
| NZIoC | Complies |
| TSCI | Complies |

Legend:

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

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

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

REACH - Registration, Evaluation, Authorization, and Restriction of Chemicals Regulation (EC 1907/2006)

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AIIC - Australian Inventory of Industrial Chemicals

NZIoC - New Zealand Inventory of Chemicals

TSCI - Taiwan Chemical Substance Inventory

15.2. Chemical safety assessment

Chemical Safety Report No information available

SECTION 16: Other information

Full text of H-Statements referred to under section 3

H302 - Harmful if swallowed

H319 - Causes serious eye irritation

H331 - Toxic if inhaled

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

Precautionary Statements - EU (§28, 1272/2008)

P273 - Avoid release to the environment

P391 - Collect spillage

P501 - Dispose of contents/ container to an approved waste disposal plant

Key or legend to abbreviations and acronyms used in the safety data sheet

EC - European Commission

CLP - EU Regulation on the Classification, Labelling and Packaging of Substances and Mixture

GHS - Globally Harmonized System of Classification and Labelling

EEC - European Economic Community

EUH - European Hazard statement

CAS - Chemical Abstracts Service

REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals

LD50 - Median Lethal Dose for 50% of subjects

WGK - Wassergefährdungsklasse

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road

RID - European Agreements Concerning the International Carriage of Dangerous Goods by Rail

IMDG - International Maritime Dangerous Goods

IATA - International Air Transport Association

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)

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Ceiling Maximum limit value * Skin designation

Classification procedure

Calculation method

Bridging principle "Substantially similar mixtures"

Expert judgment and weight of evidence determination

Key literature references and sources for data used to compile the SDS

Acute Exposure Guideline Level(s) (AEGl(s))

Agency for Toxic Substances and Disease Registry (ATSDR)

Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

EPA (Environmental Protection Agency)

European Chemicals Agency

European Food Safety Authority (EFSA)

Food Research Journal

Hazardous Substance Database

International Uniform Chemical Information Database (IUCLID)

Japan GHS Classification

National Library of Medicine's ChemID Plus (NLM CIP)

National Library of Medicine's PubMed database (NLM PUBMED)

National Toxicology Program (NTP)

New Zealand's Chemical Classification and Information Database (CCID)

NIOSH (National Institute for Occupational Safety and Health)

Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications

Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme

Organisation for Economic Co-operation and Development Screening Information Data Set

RTECS (Registry of Toxic Effects of Chemical Substances)

U.S. Environmental Protection Agency ChemView Database

U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act

U.S. Environmental Protection Agency High Production Volume Chemicals World Health Organization

Training Advice None in particular. The information required is contained in this Safety Data Sheet.

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided in this Safety Data Sheet 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 guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.
