

# Safety Data Sheet

according to regulation (EC) No 1907/2006 (REACH)

Trade name: **MOLYTROP® standard**

Print date: 22.03.2019

Revision date: 22.03.2019

Version 1.1

replaces version 1.0

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




- 1.1 Product identifier **MOLYTROP® standard**
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
- Identified uses Coating dry lubricant on base of MoS<sub>2</sub> only for industrial use for example at rails, guides, rings, wheels, racks, bearings, rolling bearings
- 1.3 Supplier Rudolf Hirner, technische Produkte e.U.  
Kleinreifling 24a  
A-4464 Weyer  
T, F: +43-7357-20812  
Email: [info@molytrop.at](mailto:info@molytrop.at)
- Competent person Rudolf Hirner (CEO)  
Email: [info@molytrop.at](mailto:info@molytrop.at)
- 1.4 Emergency telephone number +43-7357-20812  
Available during office hours  
Mo-Fr 8 a.m. – 12 a.m.

Please contact the regional poison center or emergency call.


### Austrian toxicity information center Vienna:

+43 1 406 43 43  
Available 24 hours

## SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture
-  According to regulation (EC) No. 1272/2008
- The mixture is not classified as hazardous in sense of the regulation (EC) No. 1272/2008.
- 2.2 Label elements
-  According to regulation (EC) No. 1272/2008
- EUH210 Safety data sheet available on request.
-  Hazard components for labelling
- Not applicable.
- 2.3 Other hazards
- Eye contact may cause irritation through mechanical friction because of the high solid content in the product.

## SECTION 3: Composition/information on ingredients

- 3.2 Mixtures
-  Chemical characterization
- Mixture of the following ingredients with non-hazardous additives.  
Solvent: water.

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 Hazardous ingredients

name	CAS # / EC # / Index #	% (w/w)	Classification acc. to (EC) No. 1272/2008*	
Molybdenum disulphide**	1317-33-5 / 215-263-9 / ---	20 - 40	Acute Tox. 4	H332

\* Full text of Hazard statements and hazard categories: see section 1.6.

\*\* Substance with an occupational exposure limit value (see section 8)



**SECTION 4: First aid measures**

4.1 Description of first aid measures


Seek medical advice if symptoms occur.  
 Never give anything by mouth to an unconscious person or a person with cramps.  
 Change contaminated, saturated clothing.

 In case of inhalation

Provide fresh air. In case of problems, consult a physician.  
 If unconscious place in recovery position and seek medical advice.

 In case of skin contact

After contact with skin, wash with soap and plenty of water.  
 Change contaminated, saturated clothing – wash before reuse.  
 If symptoms occur, consult a physician.

 In case of eye contact

Do not rub eyes. The solid content may cause mechanical irritation.  
 In case of contact with eyes, remove contact lens and flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Get medical advice, if symptoms occur.

 In case of ingestion

Rinse mouth thoroughly with cold water. Avoid vomiting. Get medical attention immediately.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Depending on the condition of the patients, the doctor must assess the symptoms and the overall general condition.



**SECTION 5: Firefighting measures**

5.1 Extinguishing media

 Suitable extinguishing media

CO<sub>2</sub>, extinguishing powder, Water spray  
 Fight larger fires with water jet or alcohol-resistant foam.

 Extinguishing media which must not be used for safety reasons

Waterjet





5.2 Special hazards arising from the substance or mixture  
 Fire may cause formation of CO<sub>x</sub>, SO<sub>x</sub>, toxic pyrolysis products.

5.3 Advice for firefighters  
 Special protective equipment:  
 Wear a self-contained breathing apparatus and chemical protective clothing.

**SECTION 6: Accidental release measures**

- 6.1 Personal precautions, protective equipment and emergency procedures  
 Restricted access to contaminated areas, until cleaning work is finished.  
 Avoid contact with skin and eyes. Provide adequate ventilation. Keep away from sources of ignition.  
 Wear personal protection equipment. Danger of slipping on contaminated floors.
- 6.2 Environmental precautions  
 Do not allow to enter into sewer system/surface water/ground water.
- 6.3 Methods and material for containment and cleaning up  
 Absorb with liquid binding material (e. g. sand, kieselguhr, Universal binder, acid binder, saw dust). Wash away residues with water.  
 Treat the recovered material as prescribed in the section on waste disposal (section 13).
- 6.4 Reference to other sections  
 See protective measures under section 8 and disposal under section 13.

**SECTION 7: Handling and storage**

- 7.1 Precautions for safe handling  
 Provide adequate ventilation. Avoid eye and skin contact. Keep container tightly closed.  
 Observe protective measures and safety instructions.
- 7.2 Conditions for safe storage, including any incompatibilities
-  Precautions against fire and explosion  
 No special measures required.
  -  Requirements on storage and packaging/containers  
 Provide adequate ventilation.  
 Keep dry. Protect from frost and heat.  
 Store in original container.
  -  Incompatibility with materials  
 None known.
  -  Conditions of storage Room temperature
- 7.3 Specific end use(s)  
 Coating dry lubricant on base of MoS<sub>2</sub> only for industrial use for example at rails, guides, rings, wheels, racks, bearings, rolling bearings

**SECTION 8: Exposure controls/personal protection**

8.1 Control parameters

Observe the member state specific regulations.

**MAK (maximum workplace concentrations)-value (valid for A acc. to GKV 2018 Annex 1)**

name	CAS#	MAK	TMW / KZW*		notes	duration
			[ppm]	[mg/m <sup>3</sup> ]		
Molybdenum and insoluble compounds (calculated as Mo)		MAK		10 E / 20 E		2x60(Miw)


\*TMW Daily average value  
 E Breathable fraction  
 A Alveolar fraction

KZW  
 Miw

Short-time value  
 instantaneous value

**Valid for Germany acc. to TRGA 900:** The product does not contain any relevant quantities of substances with critical values that have to be monitored at the workplace.

8.2 Exposure control

 General protection and hygiene measures

When handling with chemical substances observe usual precautionary measures.  
 Keep away from foods and drinks.  
 When using do not eat, drink, smoke.  
 Wash hands after working with product.  
 Avoid contact with skin and eyes.  
 Avoid breathing aerosols. Change contaminated clothing and wash before reuse.

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

 Respiratory protection

In normal cases not necessary.

 Hand protection

It´s recommended to wear protective gloves (Glove material e. g. nitril rubber)

The selection of suitable gloves depends not only on the material, but also on other quality characteristics. Breakthrough times and swelling properties of the material must be taken into consideration.

 Eye protection

Protective goggles

 Body protection




















Working clothes.

 Environmental exposure controls

Do not allow to enter into sewer system/surface water/ground water.

**SECTION 9: Physical and chemical properties**

9.1 Information on basic physical and chemical properties

 Physical state / Appearance	pasty
 Colour	Dark-grey
 Odour	Low, wax-like
 Odour threshold	No information available.
 pH value	5
 Melting point/range	450 °C (sublimation MoS <sub>2</sub> )
 Boiling point/range	n. a.
 Flash point	n.a.
 Evaporation rate	No information available.
 Upper/lower explosive limits	No information available.
 Vapour pressure (27 °C)	No information available.
 Density (20 °C)	No information available.
 Solubility in water (20 °C)	Soloid content insoluble
 Partition coefficient: n-octanol/water;	No information available.
 Auto-ignition temperature	No information available.
 Decomposition temperature	No information available.
 Viscosity	No information available.
 Explosion properties	Not explosive
 Oxidising properties	No information available.

9.2 Other information

None.

**SECTION 10: Stability and reactivity**

10.1 Reactivity

No hazardous reactions known if stored and used as prescribed.

10.2 Chemical stability

No decomposition if used as prescribed.

10.3 Possibility of hazardous reactions

Molybdenum disulphide may react with fluorine in a hazard way.

10.4 Conditions to avoid

None known.

10.5 Incompatible materials

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Strong oxidizing agents

10.6 Hazardous decomposition products

No decomposition if used as prescribed.



**SECTION 11: Toxicological information**

11.1 Information on toxicological effects

Toxicological data for the product are not available.

LD<sub>50</sub> values of single components relevant for classification

name	CAS-No	
Molybdenum disulphide	1317-33-5	LC <sub>50</sub> (inhalation/rat/4h)=2.82 mg/l

Acute toxicity

Based on available data classification criteria are not fulfilled.

ATE<sub>mix</sub> (oral, calculated) > 2000 mg/kg

Skin corrosion/irritation

Based on available data classification criteria are not fulfilled.

Serious eye damage/irritation

Based on available data classification criteria are not fulfilled.

Irritation through mechanical friction is possible

Skin/Respiratory sensitization

Based on available data classification criteria are not fulfilled.

Germ cell mutagenicity

Based on available data classification criteria are not fulfilled.

Carcinogenicity

None of the substances in a concentration of equal or higher than 0.1 % in this product is listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

Based on available data classification criteria are not fulfilled.

Reproductive toxicity

Based on available data classification criteria are not fulfilled.

Specific target organ toxicity – single exposure

Based on available data classification criteria are not fulfilled.

Specific target organ toxicity – repeated exposure

Based on available data classification criteria are not fulfilled.

Aspiration hazard

Based on available data classification criteria are not fulfilled.

Other information

The product was classified on the basis of the calculation procedure of the CLP- Regulation (EC) 1272/2008.

## SECTION 12: Ecological information

### 12.1 Toxicity

Ecotoxicological data for the product are not available.

The product was classified on the basis of the calculation procedure of the CLP- Regulation (EC) 1272/2008.

#### Aquatic Toxicity of ingredients

*Molybdenum disulphide* (CAS: 1317-33-5) (source: external MSDS)

CE0  $\geq$  1 mg/l (daphnia)

CE50  $\geq$  10000 mg/l (bacteria)

CL96h  $>$  0.003 mg/l (fish)

### 12.2 Persistence and degradability

Contains inorganic substances. Methods of biodegradability are not applicable.

### 12.3 Bioaccumulative potential

No data available.

### 12.4 Mobility in soil

No data available for this product.

### 12.5 Results of PBT and vPvB assessment

Contains inorganic substances. Methods of PBT and vPvB assessment are not applicable.

### 12.6 Other adverse effects

Do not allow to enter into sewer system/surface water/ground water.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Any disposal practice must be in compliance with all local and national laws and regulations.

Customers are advised to check their local legislation governing the disposal of waste materials.

If this preparation becomes a waste, the final user must define and assign the appropriate European Waste Catalogue code. Use only authorized contractors.

#### European waste catalogue

07 06 99 (wastes not otherwise specified)

Notes: The European Waste Catalogue (EWC) classifies waste materials and categorises them according to what they are and how they were produced. This may cause other classifications. The final decision belongs to the last user.

#### Uncleaned packaging

Recommendation: Completely emptied packages can be recycled by authorized contractors.

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## SECTION 14: Transport information

No dangerous good in sense of the transport regulation for land, air and sea. (Acc. to ADR 2013)

- 14.1 UN number  
Not applicable.
- 14.2 UN proper shipping name  
Not applicable.
- 14.3 Transport hazard class(es)  
Not applicable.
- 14.4 Packing group  
Not applicable.
- 14.5 Environmental hazards  
Not applicable.
- 14.6 Special precautions for user  
Not applicable.
- 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code  
Not applicable.

## SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture  
Safety Data Sheet according to REACH – Regulation (EC) No. 1907/2006.  
The mixture was classified on the basis of the calculation procedure of the CLP- Regulation (EC) 1272/2008 (Annex 1).

### **national law:**

Austria:

-  VbF – Regulation on combustible liquids (BGBl 1991/240)  
Not applicable

Germany:

-  Water hazard class acc. to AwSV of 18.04.2018  
WGK 1 (slightly hazardous to water)

- 15.2 Chemical safety assessment  
Not applicable.

## SECTION 16: Other information

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.



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All materials may present unknown hazards and should be used with caution and only for identified uses described in section 1. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

The mixture was classified on the basis of the calculation procedure of the CLP- Regulation (EC) 1272/2008 (Annex 1). The classification of ingredients is based on manufacturer's data, data of the hazardous substances database and information of the European Chemical Agency (ECHA).

 Relevant Hazard Statements

H332 Harmful if inhaled

 Relevant hazard categories

Acute Tox. 4 Acute toxicity category 4

 Version

Version No. 1.1 replaces 1.0 of 29.10.2015

Update: 8.1, 11, 15.1

Translation of German version 1.1

 Created by

UmEnA GmbH

Web: [www.umena.at](http://www.umena.at)

 Abbreviations

n.a. Not applicable.

