

DRY MOLY FLUID

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Revision date: 07/019/2017

Revision No: 9

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

1.1. Product identifier

Product name: DRY MOLY FLUID

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

Use of substance / mixture: Dry film lubricant.

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 CLP: | Eye Irrit. 2: H319; Flam. Liq. 2: H225; STOT SE 3: H336; -: EUH066; -: EUH208 |
|---------------------------------|--|
| Most important adverse effects: | Repeated exposure may cause skin dryness or cracking. Contains alkylammonium salt of a |
| | polycarboxylic acid. May produce an allergic reaction. Highly flammable liquid and vapour. |
| | Causes serious eye irritation. May cause drowsiness or dizziness. |

2.2. Label elements

| Label elements: | | | |
|--------------------|---|--|--|
| Hazard statements: | EUH066: Repeated exposure may cause skin dryness or cracking. | | |
| | EUH208: Contains alkylammonium salt of a polycarboxylic acid. May produce an allergic | | |
| | reaction. | | |
| | H225: Highly flammable liquid and vapour. | | |
| | H319: Causes serious eye irritation. | | |
| | H336: May cause drowsiness or dizziness. | | |
| Hazard pictograms: | GHS02: Flame | | |
| | GHS07: Exclamation mark | | |

DRY MOLY FLUID

(*)

Signal words: Danger

Precautionary statements:P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
No smoking.P233: Keep container tightly closed.P233: Keep container tightly closed.P241: Use explosion-proof electrical/ventilating/lighting equipment.P261: Avoid breathing dust/fumes/gas/mist/vapours/spray.P280: Wear protective gloves/protective clothing/eye protection/face protection.P303+361+353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse
skin with water/shower.P304+340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove
contact lenses, if present and easy to do. Continue rinsing.P312: Call a POISON CENTER/doctor if you feel unwell.P501: Dispose of contents/container to local/national regulations.

2.3. Other hazards

Other hazards: In use, may form flammable / explosive vapour-air mixture.

PBT: This product is not identified as a PBT/vPvB substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

ACETONE

| EINECS | CAS | PBT / WEL | CLP Classification | Percent |
|-----------|---------|-----------|---|---------|
| 200-662-2 | 67-64-1 | | Flam. Liq. 2: H225; Eye Irrit. 2: H319; STOT SE 3: H336; -: EUH066 | 50-70% |

PROPAN-2-OL

| 200-661-7 | 67-63-0 | - | Flam. Liq. 2: H225; Eye Irrit. 2: H319; | 10-20% |
|-----------|---------|---|---|--------|
| | | | STOT SE 3: H336 | |

MOLYBDENUM DISULPHIDE

| 215-263-9 | 1317-33-5 | Substance with a Community | - | 10-20% |
|-----------|-----------|----------------------------|---|--------|
| | | workplace exposure limit. | | |

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ORGANIC DERIVATIVE OF BENTONITE CLAY - REACH registered number(s): 01-0000015005-83-XXXX

| 401-480-8 | - | Substance with a Community | - | <1% |
|---|---|----------------------------|---|-----|
| | | workplace exposure limit. | | |
| ALKYLAMMONIUM SALT OF A POLYCARBOXYLIC ACID | | | | |

Mixture Flam. Liq. 3: H226; Skin Irrit. 2: H315; Eye Irrit. 2: H319; Skin Sens. 1: H317; STOT SE 3: H335; STOT RE 2: H373; Aquatic Chronic 2: H411; STOT SE 3: H336 <1%</th>

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Remove all contaminated clothes and footwear immediately unless stuck to skin. Wash immediately with plenty of soap and water.

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

Ingestion: Wash out mouth with water. Consult a doctor.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. Consult a doctor.

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

Skin contact: There may be irritation and redness 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: There may be irritation of the throat with a feeling of tightness in the chest. Exposure may cause coughing or wheezing.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

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

Immediate / special treatment: Eye bathing equipment should be available on the premises.

Section 5: Fire-fighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

Exposure hazards: Highly flammable. In combustion emits toxic fumes. Forms explosive air-vapour mixture.

Vapour may travel considerable distance to source of ignition and flash back.

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.

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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. If outside do not approach from downwind. If outside keep bystanders upwind and away from danger point. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Turn leaking containers leak-side up to prevent the escape of liquid. Eliminate all sources of ignition.

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. Do not use equipment in clean-up procedure which may produce sparks.

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Avoid the formation or spread of mists in the air. Smoking is forbidden. Use non-sparking tools.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a cool, well ventilated area. Keep container tightly closed. Keep away from sources of ignition. Prevent the build up of electrostatic charge in the immediate area. Ensure lighting and electrical equipment are not a source of ignition.

Suitable packaging: Must only be kept in original packaging.

7.3. Specific end use(s)

Specific end use(s): No data available.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Hazardous ingredients:

ACETONE

DRY MOLY FLUID

| Workplace exposure limits: | | Respirable dust | | |
|----------------------------|-----------------------|---------------------|------------|--------------|
| State | 8 hour TWA | 15 min. STEL | 8 hour TWA | 15 min. STEL |
| UK | 1210 mg/m3 | 3620 mg/m3 - | | - |
| PROPAN-2-0 | OL | | | |
| UK | 400 ppm, 999 mg/m3 | 500 ppm, 1250 mg/m3 | - | - |
| MOLYBDEN | IUM DISULPHIDE | | | |
| UK | - | - | 15mg/m3 | 10mg/m3 |
| ORGANIC D | ERIVATIVE OF BENTONIT | E CLAY | | |
| UK | - | 0.3 | 0.1 | - |
| | | | | |

DNEL/PNEC Values

Hazardous ingredients:

ACETONE

| Туре | Exposure | Value | Population | Effect |
|------|---------------------|-------|------------|----------|
| DNEL | Dermal | 186 | Workers | Local |
| DNEL | Inhalation | 2420 | Workers | Local |
| DNEL | Oral | 62 | Consumers | Systemic |
| PNEC | Fresh water | 10.6 | - | - |
| PNEC | Marine water | 1.06 | - | - |
| PNEC | Soil (agricultural) | 33.3 | - | - |
| PNEC | - | - | - | - |

8.2. Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area. Ensure lighting and electrical equipment are not a source of ignition.

Respiratory protection: Self-contained breathing apparatus must be available in case of emergency.

Hand protection: Protective gloves. Nitrile gloves.

Eye protection: Safety glasses. Ensure eye bath is to hand.

Skin protection: Protective clothing.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| State: | Liquid |
|----------------------|--------------------------------|
| Colour: | Black |
| Odour: | Sweet-smelling |
| Evaporation rate: | Fast |
| Oxidising: | Non-oxidising (by EC criteria) |
| Solubility in water: | Slightly soluble |

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| Viscosity: | Non-viscous | | |
|-------------------------------|--|------------------------------|--------------------|
| Kinematic viscosity: | <=20.5 | | |
| Viscosity test method: | Kinematic viscosity in 10-6 m2/s at 40°C | ; (ISO 3104/3105) | |
| Boiling point/range°C: | >35 | Melting point/range°C: | < 0 |
| Flammability limits %: lower: | 3.5 | upper: | 9.5 |
| Flash point°C: | -5 P | Part.coeff. n-octanol/water: | No data available. |
| Autoflammability°C: | > 200 | Vapour pressure: | No data available. |
| Relative density: | 0.9 | pH: | Approx. 7 |
| VOC g/l: | 731 | | |

9.2. Other information

Other information: No data available.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

10.2. Chemical stability

Chemical stability: Stable under normal conditions. Stable at room temperature.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.

Decomposition may occur on exposure to conditions or materials listed below.

10.4. Conditions to avoid

Conditions to avoid: Heat. Hot surfaces. Sources of ignition. Flames.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong acids.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes.

Section 11: Toxicological information

11.1. Information on toxicological effects

Hazardous ingredients:

ACETONE

| IVN | RAT | LD50 | 5500 | mg/kg |
|-----|-----|------|------|-------|
| ORL | MUS | LD50 | 3 | gm/kg |
| ORL | RAT | LD50 | 5800 | mg/kg |

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PROPAN-2-OL

| IVN | RAT | LD50 | 1088 | mg/kg |
|-----|-----|------|------|-------|
| ORL | MUS | LD50 | 3600 | mg/kg |
| ORL | RAT | LD50 | 5045 | mg/kg |
| SCU | MUS | LDLO | 6 | gm/kg |

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| ORAL RA | LD50 | > 5000 | mg/kg |
|---------|------|--------|-------|
|---------|------|--------|-------|

ALKYLAMMONIUM SALT OF A POLYCARBOXYLIC ACID

| ORAL RAT LD50 | 5000 | mg/kg |
|---------------|------|-------|
|---------------|------|-------|

Relevant hazards for product:

| Hazard | Route | Basis |
|-------------------------------|-------|-----------------------|
| Serious eye damage/irritation | OPT | Hazardous: calculated |
| STOT-single exposure | - | Hazardous: calculated |

Symptoms / routes of exposure

| Skin contact: | There may be irritation and redness 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: | There may be irritation of the throat with a feeling of tightness in the chest. Exposure may |
| | |

cause coughing or wheezing.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

Section 12: Ecological information

12.1. Toxicity

Hazardous ingredients:

ACETONE

| BLUEGILL (Lepomis macrochirus) | LC50 | 8300 | mg/l |
|--------------------------------|------|------|------|
|--------------------------------|------|------|------|

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| Daphnia magna | 48H EC50 | > 300 | mg/l |
|-------------------------------------|-----------|-------|------|
| Daphnia magna | 96H ErC50 | >230 | mg/l |
| RAINBOW TROUT (Oncorhynchus mykiss) | 96H LC50 | > 500 | mg/l |

12.2. Persistence and degradability

Persistence and degradability: No data available.

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12.3. Bioaccumulative potential

Bioaccumulative potential: No data available.

12.4. Mobility in soil

Mobility: Readily absorbed into soil.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: Negligible ecotoxicity.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Transfer to a suitable container and arrange for collection by specialised disposal company.

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

14.1. UN number

UN number: UN1993

14.2. UN proper shipping name

Shipping name: FLAMMABLE LIQUID, N.O.S.

(contains acetone, propan-2-ol)

14.3. Transport hazard class(es)

Transport class: 3

14.4. Packing group

Packing group: ||

14.5. Environmental hazards

Environmentally hazardous: No

Marine pollutant: No

14.6. Special precautions for user

Special precautions: No special precautions.

Section 15: Regulatory information

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

Specific regulations: Not applicable.

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| or the substance or the mixture by |
|------------------------------------|
| |

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15.2. Chemical Safety Assessment

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

Section 16: Other information

| Other information | |
|------------------------------|--|
| Other information: | EC Directive 1999/45/EC relating to the classification, packaging and labelling of dangerous |
| | preparations. |
| | EC Directive 91/155/EEC defining the laying down and detailed arrangements for the system |
| | of specific information relating to dangerous preparations. |
| | Compiled in accordance with REACH. |
| Phrases used in s.2 and s.3: | EUH066: Repeated exposure may cause skin dryness or cracking. |
| | EUH208: Contains <name of="" sensitising="" substance="">. May produce an allergic reaction.</name> |
| | H225: Highly flammable liquid and vapour. |
| | H226: Flammable liquid and vapour. |
| | H315: Causes skin irritation. |
| | H317: May cause an allergic skin reaction. |
| | H319: Causes serious eye irritation. |
| | H335: May cause respiratory irritation. |
| | H336: May cause drowsiness or dizziness. |
| | H373: May cause damage to organs <or affected,="" all="" if="" known="" organs="" state=""> through</or> |
| | prolonged or repeated exposure <state conclusively="" exposure="" if="" is="" it="" no<="" of="" proven="" route="" td="" that=""></state> |
| | other routes of exposure cause the hazard>. |
| | H411: Toxic to aquatic life with long lasting effects. |
| 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. |