Safety data sheet

According to 1907/2006 EEC Article 31

Printing date: 06.02.2013 Version: 1 Revision: 06.02.2013

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

· **1.1 Product identifier**

· **Trade name: Muc Off Dry Chainlube + PTFE**

· **Article number:** 18-35645-0200

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

· **Sector of Use**

SU21 Consumer uses: Private households / general public / consumers

SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

· **Product category** PC24 Lubricants, greases, release products

· **Process category** PROC11 Non industrial spraying

· **Environmental release category**

ERC8a Wide dispersive indoor use of processing aids in open systems

ERC8d Wide dispersive outdoor use of processing aids in open systems

· **Application of the substance / the preparation** -

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Muc-Off Ltd
1st Floor, Unit 1,
Concept Office Park,
Innovation Close,
Poole, Dorset,
BH12 4QT. UK

· **1.4 Emergency telephone number:** During normal opening hours: Tel: +44 (0)1202 307790

2 Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**

GHS02 fl

Flam. Aerosol 1 H222 Extremely flammable aerosol.

GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

GHS07

Skin Irrit. 2 H315 Causes skin irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

Xi; Irritant

R38: Irritating to skin.

F+; Extremely flammable

R12: Extremely flammable.

N; Dangerous for the environment

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IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
MAL-Code: Måleteknisk Arbejdshygiejnisk Luftbehov (Regulation for the labeling concerning inhalation hazards, Denmark)
DNEL: Derived No-Effect Level (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

· *** Data compared to the previous version altered. ***

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

R67: Vapours may cause drowsiness and dizziness.

· **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
Warning! Pressurized container.
Has a narcotizing effect.

· **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

· **2.2 Label elements**

· **Labelling according to EU guidelines:**
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

· **Code letter and hazard designation of product:**

Xi Irritant
F+ Extremely flammable
N Dangerous for the environment

· **Risk phrases:**
12 Extremely flammable.
38 Irritating to skin.
50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
67 Vapours may cause drowsiness and dizziness.

· **Safety phrases:**
2 Keep out of the reach of children.
16 Keep away from sources of ignition - No smoking.
23 Do not breathe vapour/spray.
29 Do not empty into drains.
46 If swallowed, seek medical advice immediately and show this container or label.
51 Use only in well-ventilated areas.

· **Special labelling of certain preparations:**
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.
Do not spray on a naked flame or any incandescent material.
Buildup of explosive mixtures possible without sufficient ventilation.

· **Classification in accordance with Directive 75/324/EEC:** Extremely flammable

· **Additional information:**
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.
Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No smoking.
Buildup of explosive mixtures possible without sufficient ventilation.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

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3 Composition/information on ingredients

· **3.1 Substances**

· **Additional information:**

CAS: 142-82-5 EINECS: 205-563-8	heptane Xn R65; Xi R38; F R11; N R50/53 R67 Flam. Liq. 2, H225; Asp. Tox. 1, H304; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Irrit. 2, H315; STOT SE 3, H336	25-<50%
CAS: 106-97-8 EINECS: 203-448-7 Reg.nr.: 01-2119474691-32	butane (containing < 0.1% butadiene (203-450-8)) F+ R12 Flam. Gas 1, H220; Press. Gas, H280	25-<50%
CAS: 108-87-2 EINECS: 203-624-3	Methylcyclohexane Xn R65; Xi R38; F R11; N R51/53 R67 Flam. Liq. 2, H225; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; STOT SE 3, H336	10-<25%
CAS: 74-98-6 EINECS: 200-827-9 Reg.nr.: 01-2119486944-21	propane F+ R12 Flam. Gas 1, H220; Press. Gas, H280	2.5-<10%
CAS: 67-63-0 EINECS: 200-661-7 Reg.nr.: 01-2119457558-25	propan-2-ol Xi R36; F R11 R67 Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	1.0-<2.5%
CAS: 110-82-7 EINECS: 203-806-2	cyclohexane Xn R65; Xi R38; F R11; N R50/53 R67 Flam. Liq. 2, H225; Asp. Tox. 1, H304; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Irrit. 2, H315; STOT SE 3, H336	0.1-<1.0%

· **3.2 Mixtures**

· **Description:** Active substance with propellant

· **Dangerous components:** -

· **Ingredients according to detergents guidline 648/2004/EC**	
aliphatic hydrocarbons	≥ 30%

· **Additional information:**

4 First aid measures

· **4.1 Description of first aid measures**

· **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:** Rinse opened eye for several minutes under running water.

· **After swallowing:** Do not induce vomiting; call for medical help immediately.

· **4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

· **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:**

Water haze

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Fire-extinguishing powder
Carbon dioxide
Alcohol resistant foam

· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
· **5.3 Advice for firefighters**
· **Protective equipment:** Mount respiratory protective device.

6 Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
· **6.2 Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
· **6.3 Methods and material for containment and cleaning up:** Ensure adequate ventilation.
· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
· **Information about fire - and explosion protection:**
Do not spray onto a naked flame or any incandescent material.
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C, i.e. electric lights. Do not pierce or burn, even after use.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:**
Store in a cool location.
Observe official regulations on storing packagings with pressurized containers.
· **Information about storage in one common storage facility:**
Observe official regulations on storing packagings with pressurized containers.
· **Further information about storage conditions:**
Keep receptacle tightly sealed.
Do not seal receptacle gas tight.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
· **7.3 Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
142-82-5 heptane	
WEL	Long-term value: 2085 mg/m³, 500 ppm

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106-97-8 butane (containing < 0.1% butadiene (203-450-8))	
WEL	Short-term value: 1810 mg/m³, 750 ppm Long-term value: 1450 mg/m³, 600 ppm Carc (if more than 0.1% of buta-1.3-diene)
74-98-6 propane	
OEL	Short-term value: 3600 mg/m³, 2000 ppm Long-term value: 1800 mg/m³, 1000 ppm
67-63-0 propan-2-ol	
WEL	Short-term value: 1250 mg/m³, 500 ppm Long-term value: 999 mg/m³, 400 ppm
110-82-7 cyclohexane	
WEL	Short-term value: 1050 mg/m³, 300 ppm Long-term value: 350 mg/m³, 100 ppm

· **DNELs**

67-63-0 propan-2-ol		
Oral	DNEL Long term-systemic	26 mg/kg bw/day (Consumer)
Dermal	DNEL Long term-systemic	319 mg/kg bw/day (Consumer)
		888 mg/kg bw/day (Worker)
Inhalative	DNEL Long term-systemic	89 mg/m3 (Consumer)
		500 mg/m3 (Worker)

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.
Avoid contact with the skin.
Avoid contact with the eyes and skin.
· **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Use suitable respiratory protective device in case of insufficient ventilation.
Filter AX/P2
· **Protection of hands:**

Protective gloves

Solvent resistant gloves
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· **Material of gloves** Nitrile rubber, NBR
· **Penetration time of glove material**
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye protection:**

Tightly sealed goggles

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· **Body protection:** Use protective suit.

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9 Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Aerosol
Colour:	Whitish
· **Odour:**	Odourless
· **Odour threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	0 °C
· **Flash point:**	-97 °C
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	215 °C
· **Decomposition temperature:**	Not determined.
· **Self-igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/ vapour mixtures are possible.
· **Explosion limits:**	
Lower:	1.1 Vol %
Upper:	12.0 Vol %
· **Vapour pressure at 20 °C:**	4 Bar
· **Density at 20 °C:**	0.685 g/cm³
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **Evaporation rate**	Not applicable.
· **Solubility in / Miscibility with water:**	Not miscible or difficult to mix.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	84.3 %
Solids content:	3.6 %
· **9.2 Other information**	No further relevant information available.

10 Stability and reactivity

· **10.1 Reactivity**
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions** No dangerous reactions known.
· **10.4 Conditions to avoid** No further relevant information available.

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· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity:**

· **LD/LC50 values relevant for classification:**		
67-63-0 propan-2-ol		
Oral	LD50	5840 mg/kg (rat)
Dermal	LD50	13900 mg/kg (rabbit)
Inhalative	LC50/6h	25000 mg/m3 (rat)
110-82-7 cyclohexane		
Oral	LD50	12705 mg/kg (rat)

· **Primary irritant effect:**
· **on the skin:** Irritant to skin and mucous membranes.
· **on the eye:** No irritating effect.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Irritant

12 Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**	
142-82-5 heptane	
EC50/24h	>10 mg/l (Daphnia magna)
LC50(48h)	4924 mg/l (Fish)
108-87-2 Methylcyclohexane	
LC50(48h)	5 mg/l (Fish)
67-63-0 propan-2-ol	
LC50 (24h)	9714 mg/l (Daphnia magna)
LC50/96h	9640 mg/l (Pimephales promelas)
LOEC (8 days)	1000 mg/l (algae)

· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **Ecotoxical effects:**
· **Remark:** Very toxic for fish
· **Additional ecological information:**
· **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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· **12.6 Other adverse effects** No further relevant information available.

13 Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packaging:**
· **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

· **14.1 UN-Number**	
· **ADR, IMDG, IATA**	UN1950
· **14.2 UN proper shipping name**	
· **ADR**	1950 AEROSOLS, ENVIRONMENTALLY HAZARDOUS
· **IMDG**	AEROSOLS (HEPTANES, METHYLCYCLOHEXANE), MARINE POLLUTANT
· **IATA**	AEROSOLS, flammable
· **14.3 Transport hazard class(es)**	
· **ADR**	
· **Class**	2 5F Gases.
· **Label**	2.1
· **IMDG**	
· **Class**	2.1
· **Label**	2.1
· **IATA**	
· **Class**	2.1
· **Label**	2.1
· **14.4 Packing group**	
· **ADR, IMDG, IATA**	Void
· **14.5 Environmental hazards:**	Product contains environmentally hazardous substances: heptane
· **Marine pollutant:**	Yes Symbol (fish and tree)
· **Special marking (ADR):**	Symbol (fish and tree)
· **14.6 Special precautions for user**	Warning: Gases.

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· **Danger code (Kemler):**	-
· **EMS Number:**	F-D,S-U
· **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Limited quantities (LQ)**	1L
· **Transport category**	2
· **Tunnel restriction code**	D
· **UN "Model Regulation":**	UN1950, AEROSOLS, ENVIRONMENTALLY HAZARDOUS, 2.1

15 Regulatory information

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

· **National regulations:**

· **Technical instructions (air):**

Class	Share in %
NK	50-100

· **VOC-CH** 84.25 %
· **VOC-EU** 577.1 g/l
· **Danish MAL Code** 3-3
· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H220 Extremely flammable gas.
H225 Highly flammable liquid and vapour.
H280 Contains gas under pressure; may explode if heated.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.

R11 Highly flammable.
R12 Extremely flammable.
R36 Irritating to eyes.
R38 Irritating to skin.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65 Harmful: may cause lung damage if swallowed.
R67 Vapours may cause drowsiness and dizziness.

· **Department issuing MSDS:** Research & Development
· **Contact:** Ing. J. Sleumer
· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)