



[MATERIAL SAFETY DATA SHEET]

According to 1907/2006 EEC Article 31

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

- **Product identifier**
- **Trade name: Muc-Off MO94**
- **Article number: 18-00000-1719**
- **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)

SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites

- **Product category** PC24 Lubricants, greases, release products
- **Process category**

PROC11 Non industrial spraying

PROC7 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** Lubricant

- **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
+44 (0)1202 307790

www.muc-off.com

ag@muc-off.com

- **Further information obtainable from:**

Research & Development/E-mail: ag@muc-off.com

- **Emergency telephone number:**

During normal opening hours: Tel: +44(0)1202 307790

• * **2 Hazards identification**

- **Classification of the substance or mixture**

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

GHS02

Flam. Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.

GHS08

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.

GHS07

STOT SE 3 H336 May cause drowsiness or dizziness.

- **Classification according to Directive 67/548/EEC or Directive**

1999/45/EC

F+ Extremely flammable

R12

R67

- **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.

- **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:** F+ Extremely flammable

- **Risk phrases:**

12 Extremely flammable.
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.
24 Avoid contact with skin.
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

- **Other hazards**

- **Results of PBT and vPvB assessment**

PBT: _____
Not applicable.
vPvB: _____
Not applicable.

• * **3 Composition/information on ingredients**

- **Chemical characterization: Substances**

Additional information: _____

64742-47-8 Distillates (petroleum), hydrotreated light 25-<50%
Xn R65
Asp. Tox. 1, H304
EC number: 926-141-6
Reg.nr.: 01-2119456620-43

64742-48-9 Naphtha (petroleum), hydrotreated heavy 10-<25%
Xn R65
R10-66-67
Flam. Liq. 3, H226; Asp. Tox. 1, H304; STOT SE 3, H336
EC number: 919-857-5
Reg.nr.: 01-2119463258-33

106-97-8 butane (containing < 0.1% butadiene (203-450-8)) 10-<25%
F+ R12
Flam. Gas 1, H220; Press. Gas, H280
EINECS: 203-448-7
Reg.nr.: 01-2119474691-32

74-98-6 propane 10-<25%
F+ R12
Flam. Gas 1, H220; Press. Gas, H280
EINECS: 200-827-9
Reg.nr.: 01-2119486944-21

68608-26-4 Sodium Sulfonate 1.0-<2.5%
Xi R36
Eye Irrit. 2, H319

2050-08-0 pentyl salicylate 0.1-<0.3%
N R51/53
Aquatic Chronic 2, H411
EINECS: 218-080-2

- **Chemical characterization: Mixtures**

- **Description:** Active substance with propellant

- **Dangerous components:** -

- **Ingredients according to detergents guideline 648/2004/EC**

aliphatic hydrocarbons $\geq 30\%$
anionic surfactants, aromatic hydrocarbons, COUMARIN $< 5\%$

- **Additional information:**

4 First aid measures

- **Description of first aid measures**

- **After inhalation:**

Supply fresh air; consult doctor in case of complaints.

- **After skin contact:** Generally the product does not irritate the skin.

- **After eye contact:**

Rinse opened eye for several minutes under running water.

- **After swallowing:**

Do not induce vomiting; call for medical help immediately.

- **Information for doctor:**

- **Most important symptoms and effects, both acute and delayed**

No further relevant information available.

- **Indication of any immediate medical attention and special treatment**

needed

No further relevant information available.

5 Firefighting measures

- **Extinguishing media**

- **Suitable extinguishing agents:**

Water haze
Fire-extinguishing powder
Carbon dioxide

Alcohol resistant foam

- **For safety reasons unsuitable extinguishing agents:** Water with full jet

- **Special hazards arising from the substance or mixture**

No further relevant information available.

- **Advice for firefighters**

- **Protective equipment:** Mount respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

- **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.

- **Methods and material for containment and cleaning up:**

Ensure adequate ventilation.

- **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

- **Handling:**

- **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.

- **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.

- **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.

- **Control parameters**

Ingredients with limit values that require monitoring at the workplace:

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

DNELs

64742-48-9 Naphtha (petroleum), hydrotreated heavy
Oral: DNEL Long term-systemic: 300 mg/kg bw/day (Consumer)
Dermal: DNEL Long term-systemic: 300 mg/kg bw/day (Consumer)
DNEL Long term-systemic: 300 mg/kg bw/day (Worker)
Inhalative: DNEL Long term-systemic: 900 mg/m³ (Consumer)
DNEL Long term-systemic: 1500 mg/m³ (Worker)

- **Additional information:**

The lists valid during the making were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Wash hands before breaks and at the end of work.
Do not inhale gases / fumes / aerosols.

- **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 through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:** Tightly sealed goggles
- **Body protection:** Use protective suit.

• * **9 Physical and chemical properties**

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

- **Form:** Aerosol

- **Colour:** Yellow

- **Odour:** Slightly sweetish

- **Odour threshold:** Not determined.

- | <u>Value/Range</u> | <u>Unit</u> | <u>Method</u> |
|--------------------|-------------|---------------|
|--------------------|-------------|---------------|

- **pH-value:** Not determined.

- **Change in condition**
- **Melting point/Melting range:** Undetermined.
- **Boiling point/Boiling range:** -44 ° C
- **Flash point:** -97 ° C
- **Flammability (solid, gaseous):** Not applicable.
- **Ignition temperature:** 200 ° 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:** 0.5 Vol %
- **Upper:** 10.9 Vol %
- **Vapour pressure:** at 20 ° C 8300 hPa

- **Density:** at 20 ° C 0.709 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:** 82.1 %
- **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:**

No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

LD/LC50 values relevant for classification:

64742-47-8 Distillates (petroleum), hydrotreated light

Oral: LD50: >5000 mg/kg (rat)

Dermal: LD50: >5000 mg/kg (rabbit)

Inhalative: LC50(8h): >5000 mg/m³ (rat)

64742-48-9 Naphtha (petroleum), hydrotreated heavy

Oral: LD50: >5000 mg/kg (rat)

Dermal: LD50: >5000 mg/kg (rabbit)

Inhalative: LC50 (4h): 4951 mg/m³ (rat)

68608-26-4 Sodium Sulfonate

Oral: LD50: >6000 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.

12 Ecological information

- **Toxicity**

Aquatic toxicity:

64742-47-8 Distillates (petroleum), hydrotreated light

EL0 (48h): 1000 mg/l (Daphnia magna)

EL0(72h): 1000 mg/l (Pseudokirchneriella subcapitata)

LL0(96h): 1000 mg/l (Oncorhynchus mykiss (96h))

64742-48-9 Naphtha (petroleum), hydrotreated heavy

EL0 (48h): 1000 mg/l (Daphnia magna)

EL50 (72h): >1000 mg/l (Pseudokirchneriella subcapitata)

LL50 (96h): >1000 mg/l (Oncorhynchus mykiss (96h))

NOELR (72h): 100 mg/l (Pseudokirchneriella subcapitata)

- **Persistence and degradability**

No further relevant information available.

- **Behaviour in environmental systems:**

- **Bioaccumulative potential** No further relevant information available.

- **Mobility in soil** No further relevant information available.

- **Additional ecological information:**

- **General notes:**

Water danger class 3 (German Regulation) (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

- **Results of PBT and vPvB assessment**

PBT:

Not applicable.

vPvB:

Not applicable.

- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **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

- **UN-Number**

- **ADR** UN1950

- **IMDG** UN1950
- **IATA** UN1950
- **UN proper shipping name**
- **ADR 1950 AEROSOLS**
- **IMDG AEROSOLS**
- **IATA AEROSOLS, flammable**
- **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

- **Packing group**

- **ADR** -

- **IMDG** -

- **IATA** -

- **Environmental hazards:**

- **Marine pollutant:** No

- **Special precautions for user** Warning: Gases.

- **Danger code (Kemler):** -

- **EMS Number:** F-D,S-U

- **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, 2.1

• **15 Regulatory information**

- **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** 82.08 %

- **VOC-EU** 582.1 g/l

- **Danish MAL Code** 5-3

- **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. H226 Flammable liquid and vapour. H280 Contains gas under pressure; may explode if heated. H304 May be fatal if swallowed and enters airways. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. H411 Toxic to aquatic life with long lasting effects. R10 Flammable. R12 Extremely flammable. R36 Irritating to eyes. R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R65 Harmful: may cause lung damage if swallowed. R66 Repeated exposure may cause skin dryness or cracking. R67 Vapours may cause drowsiness and dizziness.

- **Department issuing MSDS:** Research & Development

- **Contact:** Adam Goudge – ag@muc-off.com

- **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)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

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. ***