



Muc-Off Ultimate Valet Kit (Bicycle)

Product code: 382

Kit SDS: 15/09/2016



SAFETY DATA SHEET

NANO TECH BIKE CLEANER

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

1.1. Product identifier

Product name NANO TECH BIKE CLEANER
Product number 904, 906, 907

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

Identified uses Detergent.

1.3. Details of the supplier of the safety data sheet

Supplier Muc- Off Ltd
 Unit 1, 1st Floor,
 Innovation Close, Concept
 Office Park, Poole, Dorset
 BH12 4QT
 +44 (0) 1202 307790
 info@muc-off.com

1.4. Emergency telephone number

Emergency Contact Number +44 (0) 1202 307790
 (Office Hours)

Emergency Contact Number
 (Outside Office Hours)

Sds No.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

Physical hazards Not Classified
Health hazards Eye Irrit. 2 - H319
Environmental hazards Not Classified

Classification (67/548/EEC or 1999/45/EC) Xi; R36

2.2. Label elements

Pictogram



Signal word Warning

NANO TECH BIKE CLEANER

Hazard statements H319 Causes serious eye irritation.

Precautionary statements P264 Wash contaminated skin thoroughly after handling.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

TETRASODIUM EDTA 1-5%		
CAS number: 64-02-8	EC number: 200-573-9	REACH registration number: 01-2119486762-27
Classification Acute Tox. 4 - H302 Acute Tox. 4 - H332 Eye Dam. 1 - H318	Classification (67/548/EEC or 1999/45/EC) Xn; R20/22. Xi; R41	
ALCOHOLS, C12-14, ETHOXYLATED, SULFATES, SODIUM SALTS 1-5%		
CAS number: 68891-38-3	EC number: 500-234-8	REACH registration number: 01-2119488639-16
Classification Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Aquatic Chronic 3 - H412	Classification (67/548/EEC or 1999/45/EC) Xi; R38, R41	
GLYCERINE 1-5%		
CAS number: 56-81-5	EC number: 200-289-5	
Classification Not Classified	Classification (67/548/EEC or 1999/45/EC)	
TRISODIUM NITRILOTRIACETATE <1%		
CAS number: 5064-31-3	EC number: 225-768-6	REACH registration number: 01-2119519239-36
Classification Acute Tox. 4 - H302 Eye Irrit. 2 - H319 Carc. 2 - H351	Classification (67/548/EEC or 1999/45/EC) Xn;R22. Carc. Cat. 3;R40. Xi;R36.	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Composition comments The data shown are in accordance with the latest EC Directives.

SECTION 4: First aid measures

4.1. Description of first aid measures

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General information	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Never give anything by mouth to an unconscious person. Get medical attention if any discomfort continues.
Inhalation	Remove affected person from source of contamination. Get medical attention if any discomfort continues.
Ingestion	Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention if any discomfort continues.
Skin contact	Remove contaminated clothing and rinse skin thoroughly with water. Get medical attention if any discomfort continues.
Eye contact	Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention promptly if symptoms occur after washing.

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

Ingestion	May cause stomach pain or vomiting.
Eye contact	Causes serious eye irritation.

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

Notes for the doctor	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Do not use water jet as an extinguisher, as this will spread the fire.
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5.2. Special hazards arising from the substance or mixture

Specific hazards	Containers can burst violently or explode when heated, due to excessive pressure build-up.
Hazardous combustion products	Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Nitrous gases (NO _x).

5.3. Advice for firefighters

Protective actions during firefighting	Containers close to fire should be removed or cooled with water.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Wear protective clothing as described in Section 8 of this safety data sheet. Avoid inhalation of vapours and contact with skin and eyes. Provide adequate ventilation. In case of spills, beware of slippery floors and surfaces.
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6.2. Environmental precautions

Environmental precautions	Do not discharge into drains or watercourses or onto the ground. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.
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6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Stop leak if possible without risk. Absorb in vermiculite, dry sand or earth and place into containers. Flush contaminated area with plenty of water. Avoid the spillage or runoff entering drains, sewers or watercourses. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13.
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6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid spilling. Avoid contact with skin and eyes. Provide adequate ventilation.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep container tightly closed. Keep only in the original container.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

GLYCERINE

Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ mist

WEL = Workplace Exposure Limit

Ingredient comments WEL = Workplace Exposure Limits

ALCOHOLS, C12-14, ETHOXYLATED, SULFATES, SODIUM SALTS (CAS: 68891-38-3)

DNEL Industry - Dermal; Long term systemic effects: 2750 mg/kg/day
 Industry - Inhalation; Long term systemic effects: 175 mg/m³
 Consumer - Dermal; Long term systemic effects: 1650 mg/kg/day
 Consumer - Oral; Long term systemic effects: 15 mg/kg/day
 Consumer - Inhalation; Long term systemic effects: 52 mg/m³

PNEC - Fresh water; 0.24 mg/l
 - Soil; 0.946 mg/kg
 - STP; 10000 mg/l
 - Marine water; 0.024 mg/l
 - Intermittent release; 0.071 mg/l
 - Sediment (Freshwater); 5.45 mg/kg
 - Sediment (Marinewater); 0.545 mg/kg

GLYCERINE (CAS: 56-81-5)

Ingredient comments WEL = Workplace Exposure Limits

8.2. Exposure controls

Protective equipment



Eye/face protection

The following protection should be worn: Chemical splash goggles.

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Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. Neoprene. EN 374
Other skin and body protection	Wear suitable protective clothing as protection against splashing or contamination.
Respiratory protection	If ventilation is inadequate, suitable respiratory protection must be worn.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Coloured liquid.
Colour	Pink.
Odour	Characteristic.
pH	pH (concentrated solution): 10.8 - 11.4
Relative density	1.02 @ °C
Solubility(ies)	Soluble in water.

9.2. Other information

Other information	Not determined.
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.
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10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Not determined.
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10.4. Conditions to avoid

Conditions to avoid	Avoid excessive heat for prolonged periods of time.
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10.5. Incompatible materials

Materials to avoid	Strong oxidising agents.
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10.6. Hazardous decomposition products

Hazardous decomposition products	Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Nitrous gases (NO _x).
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects	No information available.
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Acute toxicity - oral

ATE oral (mg/kg)	70,016.89189189
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Acute toxicity - inhalation

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ATE inhalation (gases ppm) 190,033.78378378

ATE inhalation (vapours mg/l) 464.52702703

ATE inhalation (dusts/mists mg/l) 63.34459459

Inhalation Gas or vapour in high concentrations may irritate the respiratory system.

Ingestion Gastrointestinal symptoms, including upset stomach.

Skin contact Prolonged and frequent contact may cause redness and irritation.

Eye contact Causes serious eye irritation.

SECTION 12: Ecological Information

Ecotoxicity The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

12.1. Toxicity

Toxicity No data available.

12.2. Persistence and degradability

Persistence and degradability The surfactant(s) contained in this product complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them at their direct request, or at the request of a detergent manufacturer.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available.

12.4. Mobility in soil

Mobility The product is soluble in water.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects Not determined.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information This material and its container must be disposed of as hazardous waste. Do not puncture or incinerate, even when empty.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

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No information required.

14.2. UN proper shipping name

No information required.

14.3. Transport hazard class(es)

No information required.

ADR/RID subsidiary risk

IMDG subsidiary risk

ICAO subsidiary risk

14.4. Packing group

No information required.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

No information required.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information required.

SECTION 15: Regulatory information

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

National regulations	The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).
EU legislation	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). The surfactant(s) contained in this product complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them at their direct request, or at the request of a detergent manufacturer.
Guidance	CHIP for everyone HSG228. Approved Classification and Labelling Guide (Sixth edition) L131. Safety Data Sheets for Substances and Preparations.

15.2. Chemical safety assessment

Not applicable.

SECTION 16: Other information

Revision comments NOTE: Lines within the margin indicate significant changes from the previous revision.

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Revision date	01/07/2015
Revision	04
Supersedes date	07/04/2015
SDS number	13533
SDS status	Approved.
Signature	Muc-Off Ltd
Risk phrases in full	R20/22 Harmful by inhalation and if swallowed. R22 Harmful if swallowed. R36 Irritating to eyes. R38 Irritating to skin. R40 Limited evidence of a carcinogenic effect. R41 Risk of serious damage to eyes.
Hazard statements in full	H302 Harmful if swallowed. H315 Causes skin irritation. H318 Causes serious eye damage. H319 Causes serious eye irritation. H332 Harmful if inhaled. H351 Suspected of causing cancer. H412 Harmful to aquatic life with long lasting effects.



Safety data sheet

According to 1907/2006 EEC Article 31

Version: 7

Printing date: 11.05.2016

Revision: 11.05.2016

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

- **1.1 Product identifier**
- **Trade name:** Muc-Off Bio Degreaser (948)
- **Article number:** 11-00000-1704
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use**
 - SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
 - SU21 Consumer uses: Private households / general public / consumers
 - SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
- **Product category** PC35 Washing and cleaning products (including solvent based products)
- **Process category**
 - PROC7 Industrial spraying
 - PROC11 Non industrial spraying
- **Application of the substance / the mixture**
- **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
 - Tel: +44 (0)1202 307790
 - Fax: +44 (0)1202 746853
 - E-mail: info@muc-off.com
- **Further information obtainable from:** Research & Development/E-mail: info@muc-off.com
- **1.4 Emergency telephone number:** During normal opening hours: Tel +44 (0)1202 307790

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

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

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

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
 - The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02

- **Signal word** Danger
- **Hazard-determining components of labelling:**
 - Hydrocarbons, C10-C13, n-alkanes, cyclic, <2% aromates, Benzene <0.1%
- **Hazard statements**
 - H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.
- **Precautionary statements**
 - P101 If medical advice is needed, have product container or label at hand.
 - P102 Keep out of reach of children.
 - P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 - P251 Do not pierce or burn, even after use.
 - P260 Do not breathe spray.
 - P211 Do not spray on an open flame or other ignition source.

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- P280 Wear protective gloves / eye protection.
 P273 Avoid release to the environment.
 P271 Use only outdoors or in a well-ventilated area.
 P301+P310 IF SWALLOWED: Immediately call a doctor.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P331 Do NOT induce vomiting.
 P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
 P403 Store in a well-ventilated place.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Additional information:**
 EUH066 Repeated exposure may cause skin dryness or cracking.
 - **2.3 Other hazards**
 - **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** Active substance with propellant

- **Dangerous components:**

918-481-9 Reg.nr.: 01-2119457273-39	Hydrocarbons,C10-C13,n-alkanes,cyclic,<2% aromates, Benzene <0.1% Asp. Tox. 1, H304	50-<75%
CAS: 106-97-8 EINECS: 203-448-7 Reg.nr.: 01-2119474691-32	butane (containing < 0.1% butadiene (203-450-8)) Flam. Gas 1, H220; Press. Gas C, H280	10-<25%
CAS: 74-98-6 EINECS: 200-827-9 Reg.nr.: 01-2119486944-21	propane Flam. Gas 1, H220; Press. Gas C, H280	10-<25%

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

aliphatic hydrocarbons	≥ 30%
non-ionic surfactants	5 - 15%

- **Additional information:**

SECTION 4: First aid measures

- **4.1 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.
- **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.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
 Water haze
 Fire-extinguishing powder
 Carbon dioxide

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Trade name: Muc-Off Bio Degreaser (948)

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- 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.

SECTION 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.
Do not flush with water or aqueous cleansing agents
- **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.

SECTION 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.
Pressurised 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 pressurised containers.
- **Information about storage in one common storage facility:**
Observe official regulations on storing packagings with pressurised 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.

SECTION 8: Exposure controls/personal protection

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

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· 8.1 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/m ³ , 750 ppm Long-term value: 1450 mg/m ³ , 600 ppm Carc (if more than 0.1% of buta-1.3-diene)
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74-98-6 propane

OEL	Short-term value: 3600 mg/m ³ , 2000 ppm Long-term value: 1800 mg/m ³ , 1000 ppm
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· **Additional information:** The lists valid during the making were used as basis.

· 8.2 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.

Filter AX/P2

Use suitable respiratory protective device in case of insufficient ventilation.

Filter A/P2

· Protection of hands:

Wear gloves for the protection against chemicals according to EN 374



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

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.5 mm

· Penetration time of glove material

For continuous contact we recommend gloves with breakthrough time of at least 240 minutes, with the preference given to a breakthrough time greater than 480 minutes. For short-term or splash guard we recommend the same. We are aware that suitable gloves that offer this level of protection may not be available. In that case, a shorter breakthrough time are acceptable as long as the procedures governing maintenance and timely replacement are followed. The thickness of the gloves is not a good measure of the resistance of the gloves against a chemical substance, because this depends on the exact composition of the material from which the gloves are made.

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· Eye protection:

Safety glasses



Tightly sealed goggles

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· **Body protection:** Use protective suit. (EN-13034/6)

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

· Form:	Aerosol
· Colour:	According to product specification
· Odour:	Characteristic
· Odour threshold:	Not determined.

· **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:** 236 °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:	0.7 Vol %
· Upper:	10.9 Vol %

· **Vapour pressure at 20 °C:** 8300 hPa

· Density at 20 °C:	0.702 g/cm ³
· 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:** 94.8 %· **Solids content:** 0.2 %· **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.

· 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.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:

Hydrocarbons, C10-C13, n-alkanes, cyclic, <2% aromates, Benzene <0.1%

Oral	LD50	>5000 mg/kg (rat)
Dermal	LD50	>5000 mg/kg (rabbit)
Inhalative	LC50/4h	>4951 mg/l (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/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.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **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.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard**
May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

Hydrocarbons, C10-C13, n-alkanes, cyclic, <2% aromates, Benzene <0.1%

EL0 (48h)	1000 mg/l (Daphnia magna)
EL0(72h)	1000 mg/l (Pseudokirchneriella subcapitata)
LL0(96h)	1000 mg/l (Oncorhynchus mykiss (96h))

- **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.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Harmful to aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

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SECTION 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.

SECTION 14: Transport information

- | | |
|---|--|
| · 14.1 UN-Number | UN1950 |
| · ADR, ADN, IMDG, IATA | |
| · 14.2 UN proper shipping name | UN1950 AEROSOLS |
| · ADR, ADN | AEROSOLS |
| · IMDG | AEROSOLS, flammable |
| · IATA | |
| · 14.3 Transport hazard class(es) | |
| · ADR | |
|  | |
| · Class | 2 5F Gases. |
| · Label | 2.1 |
| · ADN | |
| · ADN/R Class: | 2 5F |
| · IMDG, IATA | |
|  | |
| · Class | 2.1 |
| · Label | 2.1 |
| · 14.4 Packing group | Void |
| · ADR, IMDG, IATA | |
| · 14.5 Environmental hazards: | |
| · Marine pollutant: | No |
| · 14.6 Special precautions for user | Warning: Gases. |
| · Danger code (Kemler): | - |
| · EMS Number: | F-D,S-U |
| · Stowage Code | SW1 Protected from sources of heat.
SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters. |

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Safety data sheet

According to 1907/2006 EEC Article 31

Printing date: 11.05.2016

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Trade name: Muc-Off Bio Degreaser (948)

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· Segregation Code	SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
· Transport category	2
· Tunnel restriction code	D
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
· UN "Model Regulation":	UN 1950 AEROSOLS, 2.1

*

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
 - **Directive 2012/18/EU**
 - **Named dangerous substances - ANNEX I** None of the ingredients is listed.
 - **Seveso category** P3a FLAMMABLE AEROSOLS
 - **Qualifying quantity (tonnes) for the application of lower-tier requirements** 150 t
 - **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
 - **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 28, 29
 - **National regulations:**
- | Class | Share in % |
|-------|------------|
| NK | 75-<100 |
- **VOC-CH** 94.80 %
 - **VOC-EU** 665.5 g/l
 - **Danish MAL Code** 5-3
 - **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 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.
H280 Contains gas under pressure; may explode if heated.
H304 May be fatal if swallowed and enters airways.
- **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

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According to 1907/2006 EEC Article 31

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Trade name: Muc-Off Bio Degreaser (948)

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IATA: International Air Transport Association
GHS: Globally Harmonised 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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
SVHC: Substances of Very High Concern
Flam. Gas 1: Flammable gases – Category 1
Aerosol 1: Aerosols – Category 1
Press. Gas C: Gases under pressure – Compressed gas
Asp. Tox. 1: Aspiration hazard – Category 1

GB



Safety data sheet

According to 1907/2006 EEC Article 31

Printing date: 02.08.2016

Version: 6

Revision: 02.08.2016

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

- **1.1 Product identifier**
- **Trade name:** Muc-Off Bike Protect (909)
- **Article number:** 18-00000-4123
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use**
 - SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites
 - 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**
 - PROC7 Industrial spraying
 - PROC11 Non industrial spraying
- **Application of the substance / the mixture** Lubricant
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 - Muc-Off Ltd
 - Unit 1, 1st Floor, Concept Office Park
 - Innovation Close, Poole, Dorset, BH12 4QT
 - Tel: +44 (0) 1202 307790
 - Fax: +44 (0) 1202 746853
 - E-mail: info@muc-off.com
- **Further information obtainable from:** Research & Development/E-mail: info@muc-off.com
- **1.4 Emergency telephone number:** During normal opening hours: Tel +44 (0) 1202 307790

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

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

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

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02

- **Signal word** Danger
- **Hazard-determining components of labelling:**

Hydrocarbons, C10-C13, n-alkanes, cyclic, <2% aromates, Benzene <0.1%
- **Hazard statements**

H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.
- **Precautionary statements**
 - P101 If medical advice is needed, have product container or label at hand.
 - P102 Keep out of reach of children.
 - P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 - P251 Do not pierce or burn, even after use.
 - P260 Do not breathe spray.
 - P211 Do not spray on an open flame or other ignition source.

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Safety data sheet

According to 1907/2006 EEC Article 31

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Trade name: Muc-Off Bike Protect (909)

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- P280 Wear protective gloves / eye protection.
 P271 Use only outdoors or in a well-ventilated area.
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
 P331 Do NOT induce vomiting.
 P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
 P403 Store in a well-ventilated place.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Additional information:**
 EUH066 Repeated exposure may cause skin dryness or cracking.
 - **2.3 Other hazards**
 - **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** Active substance with propellant

- **Dangerous components:**

EC number: 918-481-9 Reg.nr.: 01-2119457273-39	Hydrocarbons,C10-C13,n-alkanes,cyclic,<2% aromates, Benzene <0.1% Asp. Tox. 1, H304	50-<75%
CAS: 106-97-8 EINECS: 203-448-7 Reg.nr.: 01-2119474691-32	butane (containing < 0.1% butadiene (203-450-8)) Flam. Gas 1, H220; Press. Gas C, H280	2.5-<10%
CAS: 74-98-6 EINECS: 200-827-9 Reg.nr.: 01-2119486944-21	propane Flam. Gas 1, H220; Press. Gas C, H280	2.5-<10%

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

aliphatic hydrocarbons	≥ 30%
------------------------	-------

- **Additional information:**

SECTION 4: First aid measures

- **4.1 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.
- **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.

SECTION 5: Firefighting measures

- **5.1 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

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Trade name: Muc-Off Bike Protect (909)

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- **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.

SECTION 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.
Do not flush with water or aqueous cleansing agents
- **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.

SECTION 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.
Pressurised 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 pressurised containers.
- **Information about storage in one common storage facility:**
Observe official regulations on storing packagings with pressurised 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.

SECTION 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:**

106-97-8 butane (containing < 0.1% butadiene (203-450-8))

WEL	Short-term value: 1810 mg/m ³ , 750 ppm Long-term value: 1450 mg/m ³ , 600 ppm Carc (if more than 0.1% of buta-1.3-diene)
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Safety data sheet

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Trade name: Muc-Off Bike Protect (909)

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74-98-6 propane

OEL	Short-term value: 3600 mg/m ³ , 2000 ppm Long-term value: 1800 mg/m ³ , 1000 ppm
-----	---

· Additional Occupational Exposure Limit Values for possible hazards during processing:
Oil mist

WEL	Short-term value: 10 mg/m ³ Long-term value: 5 mg/m ³
-----	--

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

· **8.2 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.

Filter AX/P2

Use suitable respiratory protective device in case of insufficient ventilation.

Filter A/P2

· **Protection of hands:**

Wear gloves for the protection against chemicals according to EN 374



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**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.5 mm

· **Penetration time of glove material**

For continuous contact we recommend gloves with breakthrough time of at least 240 minutes, with the preference given to a breakthrough time greater than 480 minutes. For short-term or splash guard we recommend the same. We are aware that suitable gloves that offer this level of protection may not be available. In that case, a shorter breakthrough time are acceptable as long as the procedures governing maintenance and timely replacement are followed. The thickness of the gloves is not a good measure of the resistance of the gloves against a chemical substance, because this depends on the exact composition of the material from which the gloves are made.

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**

Safety glasses



Tightly sealed goggles

· **Body protection:** Use protective suit. (EN-13034/6)

GB

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Trade name: Muc-Off Bike Protect (909)

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SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Aerosol

Colour: Clear

· Odour: Sweetish

· Odour threshold: Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: -44 °C

· Flash point: -97 °C

· 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: 0.7 Vol %

Upper: 10.9 Vol %

· Vapour pressure at 20 °C: 1 hPa

· Density at 20 °C: 0.74 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: 89.1 %

Solids content: 0.8 %

· 9.2 Other information: No further relevant information available.

SECTION 10: Stability and reactivity

· 10.1 Reactivity: No further relevant information available.

· 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.

· 10.5 Incompatible materials: No further relevant information available.

· 10.6 Hazardous decomposition products: No dangerous decomposition products known.

GB

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According to 1907/2006 EEC Article 31

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Trade name: Muc-Off Bike Protect (909)

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SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

- **LD/LC50 values relevant for classification:**

Hydrocarbons, C10-C13, n-alkanes, cyclic, <2% aromates, Benzene <0.1%

Oral	LD50	>5000 mg/kg (rat)
Dermal	LD50	>5000 mg/kg (rabbit)
Inhalative	LC50/4h	>4951 mg/l (rat)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/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.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **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.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard**
May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

- **12.1 Toxicity**

- **Aquatic toxicity:**

Hydrocarbons, C10-C13, n-alkanes, cyclic, <2% aromates, Benzene <0.1%

EL0 (48h)	1000 mg/l (Daphnia magna)
EL0(72h)	1000 mg/l (Pseudokirchneriella subcapitata)
LL0(96h)	1000 mg/l (Oncorhynchus mykiss (96h))

- **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.
- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Harmful to aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 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.

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Safety data sheet

According to 1907/2006 EEC Article 31

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Revision: 02.08.2016

Trade name: Muc-Off Bike Protect (909)

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

SECTION 14: Transport information

· **14.1 UN-Number**
 · **ADR, ADN, IMDG, IATA** UN1950

· **14.2 UN proper shipping name**
 · **ADR, ADN** UN1950 AEROSOLS
 · **IMDG** AEROSOLS
 · **IATA** AEROSOLS, flammable

· **14.3 Transport hazard class(es)**

· **ADR**



· **Class** 2 5F Gases.
 · **Label** 2.1

· **ADN**
 · **ADN/R Class:** 2 5F

· **IMDG, IATA**



· **Class** 2.1
 · **Label** 2.1

· **14.4 Packing group**
 · **ADR, IMDG, IATA** Void

· **14.5 Environmental hazards:**
 · **Marine pollutant:** No

· **14.6 Special precautions for user** Warning: Gases.
 · **Danger code (Kemler):** -
 · **EMS Number:** F-D,S-U
 · **Stowage Code** SW1 Protected from sources of heat.
 SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.
 · **Segregation Code** SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.

· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.

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Trade name: Muc-Off Bike Protect (909)

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· Transport/Additional information:
· ADR

- **Limited quantities (LQ)** 1L
- **Excepted quantities (EQ)** Code: E0
Not permitted as Excepted Quantity
- **Transport category** 2
- **Tunnel restriction code** D

· IMDG

- **Limited quantities (LQ)** 1L
- **Excepted quantities (EQ)** Code: E0
Not permitted as Excepted Quantity

- **UN "Model Regulation":** UN 1950 AEROSOLS, 2.1

SECTION 15: Regulatory information

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

- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category P3a** FLAMMABLE AEROSOLS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 150 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 28, 29

· National regulations:

Class	Share in %
NK	75-<100

- **VOC-CH** 89.08 %
- **VOC-EU** 656.5 g/l
- **Danish MAL Code** 5-3
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 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.
- H280 Contains gas under pressure; may explode if heated.
- H304 May be fatal if swallowed and enters airways.

· 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 Harmonised 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) LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative

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Safety data sheet
According to 1907/2006 EEC Article 31

Printing date: 02.08.2016

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Revision: 02.08.2016

Trade name: Muc-Off Bike Protect (909)

Flam. Gas 1: Flammable gases – Category 1
Aerosol 1: Aerosols – Category 1
Press. Gas C: Gases under pressure – Compressed gas
Asp. Tox. 1: Aspiration hazard – Category 1

(Contd. of page 8)

GB



SAFETY DATA SHEET SILICON SHINE

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name Muc-Off Silicon Shine
Product No. 227

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

1.3. Details of the supplier of the safety data sheet

Supplier Muc-Off Ltd.
1st Floor, Unit 1, Concept Office
Park, Innovation Close, Poole
Dorset
BH12 4QT
UK
Tel: +44 (0)1202 307790
E-mail: info@muc-off.com

1.4. Emergency telephone number

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical and Chemical Hazards Flam. Aerosol 1 - H222
Human health Skin Irrit. 2 - H315; STOT SE 3 - H336
Environment Aquatic Chronic 3 - H412

Classification (1999/45/EEC)

Xi; R38. F+; R12. R52/53, R67.

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

2.2. Label elements

Label In Accordance With (EC) No. 1272/2008



Signal Word Danger

Hazard Statements

H222 Extremely flammable aerosol.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements

P102 Keep out of reach of children.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P261 Avoid breathing vapour/spray.
P302+352 IF ON SKIN: Wash with plenty of soap and water.
P304+340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P332+313 If skin irritation occurs: Get medical advice/attention.
P501 Dispose of contents/container in accordance with local regulations.

Supplementary Precautionary Statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Muc-Off Silicon Shine

P211	Do not spray on an open flame or other ignition source.
P251	Pressurized container: Do not pierce or burn, even after use.
P264	Wash contaminated skin thoroughly after handling.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P362	Take off contaminated clothing and wash before reuse.
P410+412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122° F.

Supplemental label information

	Contains:
SOL021	Hydrocarbons, C6 - C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane
H229	Pressurised container: May burst if heated

2.3. Other hazards

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

BUTANE			30-60%
CAS-No.: 106-97-8	EC No.: 203-448-7		
Classification (EC 1272/2008) Flam. Gas 1 - H220	Classification (67/548/EEC) F+;R12		
ISOBUTANE			10-30%
CAS-No.: 75-28-5	EC No.: 200-857-2		
Classification (EC 1272/2008) Flam. Gas 1 - H220	Classification (67/548/EEC) F+;R12		
NAPHTHA (PETROLEUM) , HYDROTREATED LIGHT			10-30%
CAS-No.: 64742-49-0	EC No.: 921-024-6	Registration Number: 01-2119475514-35-xxxx	
Classification (EC 1272/2008) Flam. Liq. 2 - H225 Skin Irrit. 2 - H315 STOT SE 3 - H336 Asp. Tox. 1 - H304 Aquatic Chronic 2 - H411	Classification (67/548/EEC) Xn;R65. Xi;R38. F;R11. N;R51/53. R67.		
NAPHTHA(PETROLEUM), HYDRODESULPHURISED LIGHT, DE-AROMATISED			1-5%
CAS-No.: 64742-49-0	EC No.: 927-510-4		
Classification (EC 1272/2008) Flam. Liq. 2 - H225 Skin Irrit. 2 - H315 STOT SE 3 - H336 Asp. Tox. 1 - H304 Aquatic Chronic 2 - H411	Classification (67/548/EEC) Xn;R65. Xi;R38. F;R11. N;R51/53. R67.		

Muc-Off Silicon Shine

PROPAN-2-OL	5-10%
CAS-No.: 67-63-0	EC No.: 200-661-7
Classification (EC 1272/2008) Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336	Classification (67/548/EEC) F;R11 Xi;R36 R67
PROPANE	10-30%
CAS-No.: 74-98-6	EC No.: 200-827-9
Classification (EC 1272/2008) Flam. Gas 1 - H220	Classification (67/548/EEC) F+;R12

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General information

Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

Inhalation

Move the exposed person to fresh air at once. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Keep the affected person warm and at rest. Get prompt medical attention.

Ingestion

DO NOT INDUCE VOMITING! Rinse mouth thoroughly with water and give large amounts of milk or water to people not unconscious. Get medical attention if any discomfort continues.

Skin contact

Wash the skin immediately with soap and water. Get medical attention if any discomfort continues.

Eye contact

Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

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

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

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

Use: Powder. Dry chemicals, sand, dolomite etc. Water spray, fog or mist.

5.2. Special hazards arising from the substance or mixture

Unusual Fire & Explosion Hazards

Aerosol cans may explode in a fire.

5.3. Advice for firefighters

Special Fire Fighting Procedures

Containers close to fire should be removed or cooled with water. Use water to keep fire exposed containers cool and disperse vapours.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

6.2. Environmental precautions

Muc-Off Silicon Shine

6.3. Methods and material for containment and cleaning up

Wear necessary protective equipment. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Let evaporate. Keep out of confined spaces because of explosion risk. If leakage cannot be stopped, evacuate area.

6.4. Reference to other sections

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Keep away from heat, sparks and open flame. Avoid spilling, skin and eye contact. Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above accepted level.

7.2. Conditions for safe storage, including any incompatibilities

Aerosol cans: Must not be exposed to direct sunlight or temperatures above 50°C.

7.3. Specific end use(s)

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
BUTANE	WEL	600 ppm	1450 mg/m ³	750 ppm	1810 mg/m ³	
NAPHTHA (PETROLEUM) , HYDROTREATED LIGHT			1200 mg/m ³	60 ppm	216 mg/m ³	
NAPHTHA(PETROLEUM), HYDRODESULPHURISED LIGHT, DE-AROMATISED			1000 mg/m ³			
PROPAN-2-OL	WEL	400 ppm	999 mg/m ³	500 ppm	1250 mg/m ³	
PROPANE		Asphyxiating	Asphyxiating.	Asphyxiating	Asphyxiating.	

WEL = Workplace Exposure Limit.

Ingredient Comments

OES = Occupational Exposure Standard. MEL = Maximum Exposure Limit.

8.2. Exposure controls

Protective equipment



Engineering measures

Provide adequate general and local exhaust ventilation.

Respiratory equipment

No specific recommendation made, but respiratory protection must be used if the general level exceeds the recommended occupational exposure limit. Use chemical cartridge protection with appropriate cartridge.

Hand protection

Use protective gloves.

Eye protection

Wear approved chemical safety goggles where eye exposure is reasonably probable. Use approved safety goggles or face shield.

Other Protection

Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.

Hygiene measures

DO NOT SMOKE IN WORK AREA! Wash hands at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Muc-Off Silicon Shine

9.1. Information on basic physical and chemical properties

Appearance	Aerosol.
Colour	Typical
Odour	Characteristic.
Flammability Limit - Lower(%)	3.0
Flammability Limit - Upper(%)	18.6

9.2. Other information

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

10.2. Chemical stability

Stable under normal temperature conditions.

10.3. Possibility of hazardous reactions

10.4. Conditions to avoid

Avoid heat, flames and other sources of ignition. Avoid contact with: Strong oxidising agents. Strong alkalis. Strong mineral acids.

10.5. Incompatible materials

10.6. Hazardous decomposition products

Fire creates: Vapours/gases/fumes of: Carbon monoxide (CO). Carbon dioxide (CO₂).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Inhalation

May cause irritation to the respiratory system. Vapours may cause headache, fatigue, dizziness and nausea. Prolonged inhalation of high concentrations may damage respiratory system. Irritating to respiratory system.

Ingestion

May cause discomfort if swallowed. May cause stomach pain or vomiting. Gastrointestinal symptoms, including upset stomach.

Skin contact

Prolonged or repeated exposure may cause severe irritation. Acts as a defatting agent on skin. May cause cracking of skin, and eczema. May cause allergic contact eczema. May cause sensitisation by skin contact. Irritating to skin.

Eye contact

Irritating to eyes. May cause chemical eye burns.

Route of entry

Inhalation. Skin and/or eye contact.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Dangerous for the environment if discharged into watercourses.

12.1. Toxicity

12.2. Persistence and degradability

12.3. Bioaccumulative potential

12.4. Mobility in soil

12.5. Results of PBT and vPvB assessment

12.6. Other adverse effects**SECTION 13: DISPOSAL CONSIDERATIONS****13.1. Waste treatment methods**

Empty containers must not be burned because of explosion hazard. Dispose of waste and residues in accordance with local authority requirements.

SECTION 14: TRANSPORT INFORMATION**14.1. UN number**

UN No. (ADR/RID/ADN)	1950
UN No. (IMDG)	1950
UN No. (ICAO)	1950

14.2. UN proper shipping name

Proper Shipping Name AEROSOLS (NAPHTHA (PETROLEUM) , HYDROTREATED LIGHT)

14.3. Transport hazard class(es)

ADR/RID/ADN Class	2.1
ADR/RID/ADN Class	Class 2: Gases
ADR Label No.	2.1
IMDG Class	2.1
ICAO Class/Division	2.1
Transport Labels	

**14.4. Packing group**

Not applicable.

14.5. Environmental hazards

Environmentally Hazardous Substance/Marine Pollutant

**14.6. Special precautions for user**

EMS	F-D, S-U
Tunnel Restriction Code	(D)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**SECTION 15: REGULATORY INFORMATION**

Muc-Off Silicon Shine

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

Uk Regulatory References

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002.

The Control of Substances Hazardous to Health Regulations 2002.

Statutory Instruments

The Control of Substances Hazardous to Health Regulations 2002.

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002.

Approved Code Of Practice

Classification and Labelling of Substances and Preparations Dangerous for Supply.

Guidance Notes

Workplace Exposure Limits EH40.

Introduction to Local Exhaust Ventilation HS(G)37.

CHIP for everyone HSG(108).

15.2. Chemical Safety Assessment

SECTION 16: OTHER INFORMATION

Revision Date	12/09/2016
Revision	16
Supersedes date	09/06/2014
Risk Phrases In Full	
R12	Extremely flammable.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R65	Harmful: may cause lung damage if swallowed.
R11	Highly flammable
R36	Irritating to eyes.
R38	Irritating to skin.
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R67	Vapours may cause drowsiness and dizziness.
Hazard Statements In Full	
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H222	Extremely flammable aerosol.
H220	Extremely flammable gas.
H412	Harmful to aquatic life with long lasting effects.
H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.



SAFETY DATA SHEET

MUC-OFF BIO DRY LUBE

Page: 1

Compilation date: 02/06/2015

Revision date: 17/03/2016

Revision No: 2

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

1.1. Product identifier

Product name: Muc-Off Dry Lube

Product code: 866, 966

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

1.3. Details of the supplier of the safety data sheet

Company name: Muc-Off Ltd
Unit 1, 1st Floor,
Innovation Close, Concept Office Park
Dorset
BH12 4QT
United Kingdom
Tel: 01202 307790

Email: info@muc-off.com

1.4. Emergency telephone number

Emergency tel: 01202 307790
(office hours only)

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: *

2.2. Label elements

Label elements:

Hazard statements: *

Hazard pictograms: *

Signal words: *

Precautionary statements: * P280: Wear eye protection.

2.3. Other hazards

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

[cont...]

SAFETY DATA SHEET

MUC-OFF BIO DRY LUBE

Page: 2

Section 3: Composition/information on ingredients

3.2. Mixtures

* Hazardous ingredients:

(2-METHOXYMETHYLETHOXY)PROPANOL - REACH registered number(s): 01-2119450011-60

EINECS	CAS	PBT / WEL	CLP Classification	Percent
252-104-2	34590-94-8	Substance with a Community workplace exposure limit.	-	10-30%

GLYCERINE

200-289-5	56-81-5	Substance with a Community workplace exposure limit.	-	10-30%
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SODIUM NITRITE - REACH registered number(s): 01-2119471836-27

231-555-9	7632-00-0	-	Ox. Sol. 3: H272; Acute Tox. 3: H301; Aquatic Acute 1: H400	<1%
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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.

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

Inhalation: Move to fresh air in case of accidental inhalation of vapours. Consult a doctor.

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

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: There may be irritation of the throat.

Inhalation: Exposure may cause coughing or wheezing. Drowsiness or mental confusion may occur.

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

Immediate / special treatment: Not applicable.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Alcohol resistant foam. Water spray. Carbon dioxide. Dry chemical powder.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: * In combustion emits toxic fumes.

[cont...]

SAFETY DATA SHEET

MUC-OFF BIO DRY LUBE

Page: 3

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.

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. Turn leaking containers leak-side up to prevent the escape of liquid.

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: * Ensure there is sufficient ventilation of the area. Avoid the formation or spread of mists in the air.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: * Store in a cool, well ventilated area. Keep container tightly closed.

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:

(2-METHOXYMETHYLETHOXY)PROPANOL

Workplace exposure limits:

Respirable dust

State	Workplace exposure limits		Respirable dust	
	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
UK	50ppm(sk)	-	-	-

[cont...]

SAFETY DATA SHEET

MUC-OFF BIO DRY LUBE

Page: 4

GLYCERINE

UK	10mg/m3	-	-	-
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DNEL/PNEC Values

DNEL / PNEC No data available.

8.2. Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area.

Respiratory protection: Respiratory protection not required.

Hand protection: Protective 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: Emulsion

Colour: * Off-white

Odour: * Pleasant

Evaporation rate: Moderate

Oxidising: Not applicable.

Solubility in water: Soluble

Viscosity: Viscous

Boiling point/range°C: 100

Melting point/range°C: <0

Flammability limits %: lower: No data available.

upper: No data available.

Flash point°C: >93

Part.coeff. n-octanol/water: No data available.

Autoflammability°C: >150

Vapour pressure: No data available.

Relative density: 1.050

pH: 7.50

VOC g/l: Not applicable.

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.

[cont...]

SAFETY DATA SHEET

MUC-OFF BIO DRY LUBE

Page: 5

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:

(2-METHOXYMETHYLETHOXY)PROPANOL

DERMAL	RBT	LD50	9150	mg/kg
ORAL	RAT	LD50	>5000	mg/kg

GLYCERINE

ORAL	RAT	LD50	23000	mg/kg
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SODIUM NITRITE

ORL	MUS	LD50	175	mg/kg
ORL	RAT	LD50	180	mg/kg
SCU	RAT	LD50	96600	µg/kg

Toxicity values: No data available.

Symptoms / routes of exposure

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: There may be irritation of the throat.

Inhalation: Exposure may cause coughing or wheezing. Drowsiness or mental confusion may occur.

Section 12: Ecological information

12.1. Toxicity

Hazardous ingredients:

(2-METHOXYMETHYLETHOXY)PROPANOL

DAPHNIA	48H EC50	1919	mg/l
FISH	96H LC50	>1000	mg/l

[cont...]

SAFETY DATA SHEET

MUC-OFF BIO DRY LUBE

Page: 6

GREEN ALGA (Selenastrum capricornutum)	96H ErC50	>969	mg/l
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12.2. Persistence and degradability

Persistence and degradability: Biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: No bioaccumulation potential.

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.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

Transport class: This product does not require a classification for transport.

Section 15: Regulatory information

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

Specific regulations: Not applicable.

15.2. Chemical Safety Assessment

Section 16: Other information

Other information

Other information: * This safety data sheet is prepared in accordance with Commission Regulation (EU) No 2015/830.

* indicates text in the SDS which has changed since the last revision.

Phrases used in s.2 and s.3: H272: May intensify fire; oxidiser.

H301: Toxic if swallowed.

H400: Very toxic to aquatic life.

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. [final page]



SAFETY DATA SHEET

MUC-OFF BIO WET LUBE

Page: 1

Compilation date: 03/06/2015

Revision No: 1

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

1.1. Product identifier

Product name: Muc-Off Bio Wet Lube

Product code: 767, 867, 967, 769, 713, 394

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

1.3. Details of the supplier of the safety data sheet

Company name: Muc- Off Ltd

Unit 1, 1st Floor, Innovation Close,

Concept Office Park

Poole, Dorset

BH12 4QT

United Kingdom

Tel: +44 (0) 1202 307790

Email: info@muc-off.com

1.4. Emergency telephone number

Emergency tel: +44 (0) 1202 307790

(office hours only)

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: This product has no classification under CLP.

2.2. Label elements

Label elements:

Precautionary statements: P280: Wear protective gloves.

2.3. Other hazards

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

Section 3: Composition/information on ingredients

3.2. Mixtures

Section 4: First aid measures

[cont...]

SAFETY DATA SHEET

MUC-OFF BIO WET LUBE

Page: 2

4.1. Description of first aid measures

Skin contact: Wash immediately with plenty of soap and water.

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

Ingestion: Wash out mouth with water.

Inhalation: Consult a doctor.

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

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: There may be irritation of the throat.

Inhalation: No symptoms.

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

Immediate / special treatment: Not applicable.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: In combustion emits toxic fumes.

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.

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. Turn leaking containers leak-side up to prevent the escape of liquid.

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.

6.4. Reference to other sections

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

Section 7: Handling and storage

[cont...]

SAFETY DATA SHEET

MUC-OFF BIO WET LUBE

Page: 3

7.1. Precautions for safe handling

Handling requirements: Not applicable.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a cool, well ventilated area. Keep container tightly closed.

7.3. Specific end use(s)

Specific end use(s): No data available.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Workplace exposure limits: No data available.

DNEL/PNEC Values

DNEL / PNEC No data available.

8.2. Exposure controls

Respiratory protection: Respiratory protection not required.

Hand protection: Protective 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: Blue

Odour: Pleasant

Evaporation rate: Negligible

Oxidising: Not applicable.

Solubility in water: Insoluble

Also soluble in: Most organic solvents.

Viscosity: Non-viscous

Boiling point/range°C: No data available.

Melting point/range°C: <10

Flammability limits %: lower: No data available.

upper: No data available.

Flash point°C: >100

Part.coeff. n-octanol/water: Not applicable.

Autoflammability°C: >200

Vapour pressure: Not applicable.

Relative density: 0.930

pH: Not applicable.

VOC g/l: Not applicable.

9.2. Other information

Other information: No data available.

[cont...]

SAFETY DATA SHEET

MUC-OFF BIO WET LUBE

Page: 4

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.

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. Flames.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong acids. Strong bases.

10.6. Hazardous decomposition products

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

Section 11: Toxicological information

11.1. Information on toxicological effects

Toxicity values: No data available.

Symptoms / routes of exposure

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: There may be irritation of the throat.

Inhalation: No symptoms.

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity values: No data available.

12.2. Persistence and degradability

Persistence and degradability: Biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: No bioaccumulation potential.

12.4. Mobility in soil

Mobility: Readily absorbed into soil. Insoluble in water. Floats on water.

[cont...]

SAFETY DATA SHEET

MUC-OFF BIO WET LUBE

Page: 5

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

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

Transport class: This product does not require a classification for transport.

Section 15: Regulatory information

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

Specific regulations: Not applicable.

15.2. Chemical Safety Assessment

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

* indicates text in the SDS which has changed since the last revision.

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.