Muc-Off Wash, Protect & Lube Kit

Product code: 851US
Kit SDS: 21/11/2018
Version 1.1

Kit Label:

See components for details.

Transport Label:

Component 904-CTJ: Not restricted for transport
Component 930: UN1950 AEROSOL, 2.1
Component 866-1M: Not restricted for transport

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 904US

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 telephone +44 (0) 1202 307790 (Office Hours)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Eye Irrit. 2 - H319

Environmental hazards Not Classified

2.2. Label elements

Pictogram

Signal word Warning

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

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

SECTION 3: Composition/information on ingredients

3.2. Mixtures

TETRASODIUM ETHYLENE DIAMINE TETRAACETATE **1-5%**

CAS number: 64-02-8 EC number: 200-573-9 REACH registration number: 01-2119486762-27-XXXX

Classification
Acute Tox. 4 - H302
Acute Tox. 4 - H332
Eye Dam. 1 - H318
STOT RE 2 - H373

ALCOHOLS, C12-14, ETHOXYLATED, SULFATES, SODIUM SALTS **< 3**

CAS number: 68891-38-3 EC number: 500-234-8 REACH registration number: 01-2119488639-16-XXXX

Classification
Skin Irrit. 2 - H315
Eye Dam. 1 - H318
Aquatic Chronic 3 - H412

The full text for all hazard statements is 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

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.

SECTION 5: Firefighting measures

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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.

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 (NOx).

5.3. Advice for firefighters

Protective actions during firefighting Containers close to fire should be removed or cooled with water.

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.

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.

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.

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

NANO TECH BIKE CLEANER

TETRASODIUM ETHYLENE DIAMINE TETRAACETATE (CAS: 64-02-8)

DNEL

Workers - Inhalation; Short term local effects: 2.5 mg/m³
Workers - Inhalation; Long term local effects: 2.5 mg/m³
Consumer - Inhalation; Short term local effects: 1.5 mg/m³
Consumer - Inhalation; Long term local effects: 1.5 mg/m³
Consumer - Oral; Long term systemic effects: 25 mg/kg/day

PNEC

- Fresh water; 2.2 mg/l
- Marine water; 0.22 mg/l
- Intermittent release; 1.2 mg/l
- Soil; 0.72 mg/kg
- STP; 43 mg/l

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

DNEL

Industry - Inhalation; Long term local effects: 56 mg/m³

PNEC

- Fresh water; 0.885 mg/l
- Marine water; 0.0885 mg/l
- Intermittent release; 8.85 mg/l
- STP; 1000 mg/l
- Soil; 0.141 mg/kg
- Sediment (Freshwater); 3.3 mg/kg
- Sediment (Marinewater); 0.33 mg/kg

8.2. Exposure controls

Protective equipment

Eye/face protection

The following protection should be worn: Chemical splash goggles.

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

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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.
Odour threshold	No information available.
pH	pH (concentrated solution): 10.8 - 11.4
Melting point	No information available.
Initial boiling point and range	No information available.
Flash point	No information available.
Evaporation rate	No information available.
Evaporation factor	No information available.
Flammability (solid, gas)	No information available.
Upper/lower flammability or explosive limits	No information available.
Other flammability	No information available.
Vapour pressure	No information available.
Vapour density	No information available.
Relative density	1.02 @ 20°C
Bulk density	No information available.
Solubility(ies)	Soluble in water.
Partition coefficient	No information available.
Auto-ignition temperature	No information available.
Decomposition Temperature	No information available.
Viscosity	No information available.
Explosive properties	No information available.
Explosive under the influence of a flame	No information available.
Oxidising properties	No information available.

9.2. Other information

Other information	Not determined.
Refractive index	No information available.
Particle size	No information available.
Molecular weight	No information available.

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Volatility	No information available.
Saturation concentration	No information available.
Critical temperature	No information available.
Volatile organic compound	No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Not determined.

10.4. Conditions to avoid

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

10.5. Incompatible materials

Materials to avoid	Strong oxidising agents.

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 (NOx).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects	No information available.

Acute toxicity - oral

ATE oral (mg/kg)	69,531.25

Acute toxicity - dermal

Notes (dermal LD_{50})	No information available.

Acute toxicity - inhalation

ATE inhalation (gases ppm)	175,781.25
ATE inhalation (vapours mg/l)	429.69
ATE inhalation (dusts/mists mg/l)	58.59

Skin corrosion/irritation

Animal data	No information available.

Serious eye damage/irritation

Serious eye damage/irritation	Causes serious eye irritation.

Respiratory sensitisation

Respiratory sensitisation	No information available.

Skin sensitisation

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Skin sensitisation No information available.

Germ cell mutagenicity

Genotoxicity - in vitro No information available.

Carcinogenicity

Carcinogenicity No information available.

Reproductive toxicity

Reproductive toxicity - fertility No information available.

Specific target organ toxicity - single exposure

STOT - single exposure No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure No information available.

Aspiration hazard

Aspiration hazard No information available.

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.

Partition coefficient No information 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.

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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

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

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).
Commission Regulation (EU) No 2015/830 of 28 May 2015.

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

NANO TECH BIKE CLEANER

No chemical safety assessment has been carried out.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet

ATE: Acute Toxicity Estimate.
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
CAS: Chemical Abstracts Service.
DNEL: Derived No Effect Level.
IATA: International Air Transport Association.
IMDG: International Maritime Dangerous Goods.
Kow: Octanol-water partition coefficient.
LC_{50}: Lethal Concentration to 50 % of a test population.
LD_{50}: Lethal Dose to 50% of a test population (Median Lethal Dose).
PBT: Persistent, Bioaccumulative and Toxic substance.
PNEC: Predicted No Effect Concentration.
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.
RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
vPvB: Very Persistent and Very Bioaccumulative.
IARC: International Agency for Research on Cancer.
MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.
cATpE: Converted Acute Toxicity Point Estimate.
BCF: Bioconcentration Factor.
BOD: Biochemical Oxygen Demand.
EC_{50}: 50% of maximal Effective Concentration.
LOAEC: Lowest Observed Adverse Effect Concentration.
LOAEL: Lowest Observed Adverse Effect Level.
NOAEC: No Observed Adverse Effect Concentration.
NOAEL: No Observed Adverse Effect Level.
NOEC: No Observed Effect Concentration.
LOEC: Lowest Observed Effect Concentration.
DMEL: Derived Minimal Effect Level.

Classification abbreviations and acronyms

Acute Tox. = Acute toxicity
Aquatic Acute = Hazardous to the aquatic environment (acute)
Aquatic Chronic = Hazardous to the aquatic environment (chronic)

Revision comments

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

Revision date

03/10/2017

Version number

1.002

Supersedes date

09/09/2016

SDS status

Approved.

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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. H373 May cause damage to organs through prolonged or repeated exposure. H412 Harmful to aquatic life with long lasting effects.
Signature	Muc-Off Ltd.

Safety Data Sheet
acc. to OSHA HCS
Version: 1

Printing date 01/19/2017 Reviewed on 01/19/2017

*

1 Identification

· **Product identifier**

· **Trade name: Muc-Off MO94 VOC <25%**

· **Article number:** 930
· **Application of the substance / the mixture** 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
Tel: +44 (0)1202 307790
E-mail: info@muc-off.com

· **Information department:** Research & Development/E-mail: info@muc-off.com
· **Emergency telephone number:** CHEMTREC: 1-800-424-9300 24HR

*

2 Hazard(s) identification

· **Classification of the substance or mixture**


GHS02 Flame

Flam. Aerosol 1 H222 Extremely flammable aerosol.


GHS04 Gas cylinder

Press. Gas H280 Contains gas under pressure; may explode if heated.


GHS08 Health hazard

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

· **Label elements**
· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**


GHS02 GHS04 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
Hydrocarbons, C14-C18, n-alkane, iso-alkane,cyclic,<2% aromates
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics
· **Hazard statements**
H222 Extremely flammable aerosol.
H280 Contains gas under pressure; may explode if heated.
H304 May be fatal if swallowed and enters airways.
· **Precautionary statements**
P210 Keep away from heat/sparks/open flames/hot surfaces. 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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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.

· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 0
Fire = 4
Reactivity = 3

· **WHMIS-ratings (scale 0 - 4)**

Health = 0
Fire = 4
Reactivity = 3

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Active substance with propellant

· **Dangerous components:**

Reg.nr.: 01-2119457736-27	Hydrocarbons, C14-C18, n-alkane, iso-alkane,cyclic,<2% aromates	50-<75%
Reg.nr.: 01-2119463258-33	Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics	10-<25%
CAS: 74-98-6 Reg.nr.: 01-2119486944-21	propane	10-<25%
CAS: 68608-26-4 Reg.nr.: 01-2119527859-22	Sulfonic acids, petroleum, sodium salts	1.0-<2.5%
CAS: 95-63-6	1,2,4-trimethylbenzene	0.1-<1.0%

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; immediately call for medical help.
· **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 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
Water haze

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Fire-extinguishing powder
Carbon dioxide
Alcohol resistant foam
· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **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.
Do not flush with water or aqueous cleansing agents
· **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.
· **Protective Action Criteria for Chemicals**

· **PAC-1:**		
74-98-6	propane	5500* ppm
577-11-7	docusate sodium	5.7 mg/m3
95-63-6	1,2,4-trimethylbenzene	140 ppm
1330-20-7	xylene (mix)	130 ppm
108-67-8	mesitylene	140 ppm
104-76-7	Isooctanol	0.1 ppm
526-73-8	1,2,3-trimethylbenzene	140 ppm
98-82-8	isopropylbenzene	50 ppm
103-65-1	propylbenzene	3.7 ppm
91-64-5	Coumarin	0.88 mg/m3

· **PAC-2:**		
74-98-6	propane	17000** ppm
577-11-7	docusate sodium	63 mg/m3
95-63-6	1,2,4-trimethylbenzene	360 ppm
1330-20-7	xylene (mix)	920* ppm
108-67-8	mesitylene	360 ppm
104-76-7	Isooctanol	100 ppm
526-73-8	1,2,3-trimethylbenzene	360 ppm
98-82-8	isopropylbenzene	300 ppm
103-65-1	propylbenzene	41 ppm
91-64-5	Coumarin	9.7 mg/m3

· **PAC-3:**		
74-98-6	propane	33000*** ppm
577-11-7	docusate sodium	380 mg/m3
95-63-6	1,2,4-trimethylbenzene	480 ppm

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1330-20-7	xylene (mix)	2500* ppm
108-67-8	mesitylene	480 ppm
104-76-7	Isooctanol	200 ppm
526-73-8	1,2,3-trimethylbenzene	480 ppm
98-82-8	isopropylbenzene	730 ppm
103-65-1	propylbenzene	240 ppm
91-64-5	Coumarin	58 mg/m3

7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
· **Information about protection against explosions and fires:**
Do not spray on 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 gas tight seal receptacle.
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 systems:** No further data; see item 7.

· **Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

74-98-6 propane	
PEL	Long-term value: 1800 mg/m³, 1000 ppm
REL	Long-term value: 1800 mg/m³, 1000 ppm
TLV	refer to Appendix F inTLVs&BEIs book; NIC-EX
95-63-6 1,2,4-trimethylbenzene	
REL	Long-term value: 125 mg/m³, 25 ppm
TLV	Long-term value: 123 mg/m³, 25 ppm

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

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· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
· **Breathing equipment:**
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.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Aerosol
Color:	Light yellow
· **Odor:**	Slightly sweetish
· **Odor threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	-44 °C (-47 °F)

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· **Flash point:**	-97 °C (-143 °F)
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	> 200 °C (> 392 °F)
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· **Explosion limits:**	
Lower:	0.5 Vol %
Upper:	10.9 Vol %
· **Vapor pressure at 20 °C (68 °F):**	8300 hPa (6226 mm Hg)
· **Density at 20 °C (68 °F):**	0.78 g/cm³ (6.509 lbs/gal)
· **Relative density**	Not determined.
· **Vapor 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:	24.8 %
Solids content:	0.9 %
· **Other information**	No further relevant information available.

10 Stability and reactivity

· **Reactivity** No further relevant information available.
· **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 that are relevant for classification:**		
Hydrocarbons, C14-C18, n-alkane, iso-alkane,cyclic,<2% aromates		
Oral	LD50	>5000 mg/kg (rat)
Dermal	LD50	>3160 mg/kg (rabbit)
Inhalative	LC50 (4h)	>5000 mg/m3 (rat)

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Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics		
Oral	LD50	>5000 mg/kg (rat)
Dermal	LD50	>5000 mg/kg (rabbit)
Inhalative	LC50 (4h)	4951 mg/m3 (rat)
68608-26-4 Sulfonic acids, petroleum, sodium salts		
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.
· **Additional toxicological information:**

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
1330-20-7	xylene (mix)	3
98-82-8	isopropylbenzene	2B
91-64-5	Coumarin	3

· **NTP (National Toxicology Program)**		
98-82-8	isopropylbenzene	R

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**	
Hydrocarbons, C14-C18, n-alkane, iso-alkane,cyclic,<2% aromates	
NOELR (72h)	3198 mg/l (Skeletonema costatum)
EL50(48h)	(Human)
	>3193 mg/l (Invertebrate)
EL50 (72h)	>3198 mg/l (Skeletonema costatum)
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics	
EL0 (48h)	1000 mg/l (Daphnia magna)
NOELR (72h)	100 mg/l (Pseudokirchneriella subcapitata)
EL50 (72h)	>1000 mg/l (Pseudokirchneriella subcapitata)
LL50 (96h)	>1000 mg/l (Oncorhynchus mykiss (96h))

· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (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.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

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13 Disposal considerations

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

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

14 Transport information

· **UN-Number**	
· **DOT, ADR, ADN, IMDG, IATA**	UN1950
· **UN proper shipping name**	
· **DOT**	Aerosols, flammable
· **ADR, ADN**	UN1950 Aerosols
· **IMDG**	AEROSOLS
· **IATA**	AEROSOLS, flammable
· **Transport hazard class(es)**	
· **DOT**	
· **Class**	2.1
· **Label**	2.1
· **ADR**	
· **Class**	2 5F Gases
· **Label**	2.1
· **ADN**	
· **ADN/R Class:**	2 5F
· **IMDG, IATA**	
· **Class**	2.1
· **Label**	2.1
· **Packing group**	
· **DOT, ADR, IMDG, IATA**	Void
· **Environmental hazards:**	Not applicable.
· **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

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·	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.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Excepted quantities (EQ)**	Code: E0 Not permitted as Excepted Quantity
· **IMDG**	
· **Limited quantities (LQ)**	1L
· **Excepted quantities (EQ)**	Code: E0 Not permitted as Excepted Quantity
· **UN "Model Regulation":**	UN 1950 AEROSOLS, 2.1

15 Regulatory information

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

· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**

95-63-6	1,2,4-trimethylbenzene

· **TSCA (Toxic Substances Control Act):**

74-98-6	propane
68608-26-4	Sulfonic acids, petroleum, sodium salts
577-11-7	docusate sodium
95-63-6	1,2,4-trimethylbenzene
2050-08-0	Amyl salicylate
98-55-5	alpha-Terpineol

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**

95-63-6	1,2,4-trimethylbenzene	II
1330-20-7	xylene (mix)	I

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108-67-8	mesitylene	II
526-73-8	1,2,3-trimethylbenzene	II
98-82-8	isopropylbenzene	D, CBD

· **TLV (Threshold Limit Value established by ACGIH)**

1330-20-7	xylene (mix)	A4

· **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **National regulations:**

Class	Share in %
NK	10-<25

· **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.

· **Contact:** Muc-off
· **Date of preparation / last revision** 01/19/2017 / -
· **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
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
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)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Flam. Aerosol 1: Aerosols – Category 1
Press. Gas: Gases under pressure – Compressed gas
Asp. Tox. 1: Aspiration hazard – Category 1

SAFETY DATA SHEET

MUC-OFF DRY LUBE

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: 866-1M

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**

1st Floor, Unit 1, Concept Office Park

Innovation Close

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: *

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...]

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%

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%

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...]

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	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
UK	50ppm(sk)	-	-	-

[cont...]

GLYCERINE

UK	10mg/m3	-	-	-

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...]

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

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...]

GREEN ALGA (Selenastrum capricornutum)	96H ErC50	>969	mg/l

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 mix

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]