



Safety data sheet According to 1907/2006 EEC Article 31

Printing date: 06.02.2013

Version: 1


Revision: 06.02.2013


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

- **1.1 Product identifier**
- **Trade name:** MUC OFF Bike Spray + PTFE
- **Article number:** 18-35645-0100
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use**
 SU21 Consumer uses: Private households / general public / consumers
 SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
- **Product category** PC24 Lubricants, greases, release products
- **Process category** PROC11 Non industrial spraying
- **Environmental release category**
 ERC8a Wide dispersive indoor use of processing aids in open systems
 ERC8d Wide dispersive outdoor use of processing aids in open systems
- **Application of the substance / the preparation** Lubricant
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**

 Muc-Off Ltd
 1st Floor, Unit 1,
 Concept Office Park,
 Innovation Close,
 Poole, Dorset,
 BH12 4QT. UK
- **1.4 Emergency telephone number:** During normal opening hours: Tel: +44 (0)1202 307790

2 Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
 GHS02 flame

 Flam. Aerosol 1 H222 Extremely flammable aerosol.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
 F+; Extremely flammable
 R12: Extremely flammable.

 R66: Repeated exposure may cause skin dryness or cracking.
- **Information concerning particular hazards for human and environment:**
 The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
 At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.
 Warning! Pressurized container.
- **Classification system:**
 The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
- **2.2 Label elements**
- **Labelling according to EU guidelines:**
 The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

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Code letter and hazard designation of product:



F+ Extremely flammable

Risk phrases:

- 12 Extremely flammable.
- 66 Repeated exposure may cause skin dryness or cracking.

Safety phrases:

- 2 Keep out of the reach of children.
- 16 Keep away from sources of ignition - No smoking.
- 23 Do not breathe vapour/spray.
- 24 Avoid contact with skin.
- 46 If swallowed, seek medical advice immediately and show this container or label.
- 51 Use only in well-ventilated areas.

Special labelling of certain preparations:

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

Additional information:

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

2.3 Other hazards

Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

3.1 Substances

Additional information:

CAS: 64742-48-9 EINECS: 265-150-3 Reg.nr.: 01-2119463258-33 01-2119457273-39	Naphtha (petroleum), hydrotreated heavy Benzene <0.1% Xn R65 R66 Asp. Tox. 1, H304	50-100%
CAS: 106-97-8 EINECS: 203-448-7 Reg.nr.: 01-2119474691-32	butane (containing < 0.1% butadiene (203-450-8)) F+ R12 Flam. Gas 1, H220; Press. Gas, H280	2.5-<10%
CAS: 74-98-6 EINECS: 200-827-9 Reg.nr.: 01-2119486944-21	propane F+ R12 Flam. Gas 1, H220; Press. Gas, H280	2.5-<10%

3.2 Mixtures

· **Description:** Active substance with propellant

Dangerous components: -

Additional information:

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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.

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

5.2 Special hazards arising from the substance or mixture No further relevant information available.

5.3 Advice for firefighters

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

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

6.2 Environmental precautions: Do not allow to enter sewers/ surface or ground water.

6.3 Methods and material for containment and cleaning up: Ensure adequate ventilation.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Information about fire - and explosion protection:

Do not spray onto a naked flame or any incandescent material.

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C, i.e. electric lights. Do not pierce or burn, even after use.

7.2 Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles:

Store in a cool location.

Observe official regulations on storing packagings with pressurized containers.

Information about storage in one common storage facility:

Observe official regulations on storing packagings with pressurized containers.

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- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Do not seal receptacle gas tight.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.
- **7.3 Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

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

8.1 Control parameters

- **Ingredients with limit values that require monitoring at the workplace:**

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.
- Use suitable respiratory protective device in case of insufficient ventilation.
- Filter AX/P2

Protection of hands:



Protective gloves

Solvent resistant gloves

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves Nitrile rubber, NBR

Penetration time of glove material

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

Eye protection:



Tightly sealed goggles

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

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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:

4 Bar

Density at 20 °C:

0.737 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: 89.9 %

9.2 Other information

No further relevant information available.

10 Stability and reactivity

10.1 Reactivity

10.2 Chemical stability

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **10.3 Possibility of hazardous reactions** No dangerous reactions known.

· **10.4 Conditions to avoid** No further relevant information available.

· **10.5 Incompatible materials:** No further relevant information available.

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

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11 Toxicological information

· **11.1 Information on toxicological effects**

· **Acute toxicity:**

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

64742-48-9 Naphtha (petroleum), hydrotreated heavy Benzene <0.1 %

Oral	LD50	>5000 mg/kg (rat)
Dermal	LD50	>3000 mg/kg (rabbit)
Inhalative	LC50/4h	>4951 mg/l (rat)

· **Primary irritant effect:**

· **on the skin:** No irritant effect.

· **on the eye:** No irritating effect.

· **Sensitization:** No sensitizing effects known.

12 Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**

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

· **Additional ecological information:**

· **General notes:**

Water danger class 3 (German Regulation) (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.

· **12.5 Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

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

13 Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packaging:**

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

14 Transport information

· **14.1 UN-Number**

· **ADR, IMDG, IATA** UN1950

· **14.2 UN proper shipping name**

· **ADR** 1950 AEROSOLS
· **IMDG** AEROSOLS

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· **IATA** AEROSOLS, flammable

· **14.3 Transport hazard class(es)**

· **ADR**



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

· **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

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

Not applicable.

· **Transport/Additional information:**

· **ADR**

· **Limited quantities (LQ)** 1L
· **Transport category** 2
· **Tunnel restriction code** D

· **UN "Model Regulation":** UN1950, AEROSOLS, 2.1

15 Regulatory information

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

· **National regulations:**

· **Technical instructions (air):**

Class	Share in %
NK	50-100

· **VOC-CH** 89.89 %

· **VOC-EU** 662.5 g/l

· **Danish MAL Code** 5-3

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

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

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· **Relevant phrases**

H220 Extremely flammable gas.
H280 Contains gas under pressure; may explode if heated.
H304 May be fatal if swallowed and enters airways.

R12 Extremely flammable.
R65 Harmful: may cause lung damage if swallowed.
R66 Repeated exposure may cause skin dryness or cracking.

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

· **Contact:** Ing. J. Sleumer

· **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organization

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

MAL-Code: Måleteknisk Arbejdshygiejnisk Luftbehov (Regulation for the labeling concerning inhalation hazards, Denmark)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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

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[MATERIAL SAFETY DATA SHEET]

Muc-Off Nano Tech Bike Cleaner

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

SUPPLIER Muc-Off Ltd
1st Floor, Unit 1,
Concept Office Park,
Innovation Close,
Poole,
Dorset,
BH12 4QT
UK
+44 (0)1202 307790
+44 (0)1202 746853
ag@muc-off.com

2 HAZARDS IDENTIFICATION

Not regarded as a health or environmental hazard under current legislation.

CLASSIFICATION (1999/45) Not classified.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content %	Classification (67/548/EEC)
TETRASODIUM ETHYLENE DIAMINE TETRAACETATE	200-573-9	64-02-8	1-5%	Xn;R20/22. Xi;R41.

The Full Text for all R-Phrases is Displayed in Section 16

4 FIRST-AID MEASURES

INHALATION

Move the exposed person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues.

INGESTION

NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Rinse mouth thoroughly. Get medical attention if any discomfort continues.

SKIN CONTACT

Remove affected person from source of contamination. Remove contaminated clothing. 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.

5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

This product is not flammable. Use fire-extinguishing media appropriate for surrounding materials.

PROTECTIVE MEASURES IN FIRE

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

Wear protective clothing as described in Section 8 of this safety data sheet.

ENVIRONMENTAL PRECAUTIONS

Do not discharge onto the ground or into water courses.

SPILL CLEAN UP METHODS

Stop leak if possible without risk. Absorb in vermiculite, dry sand or earth and place into containers. Flush with plenty of water to clean spillage area. Do not contaminate water sources or sewer.

7 HANDLING AND STORAGE

USAGE PRECAUTIONS

Avoid spilling, skin and eye contact.

STORAGE PRECAUTIONS

Store in tightly closed original container in a dry, cool and well-ventilated place. Keep in original container.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

PROTECTIVE EQUIPMENT



ENGINEERING MEASURES

Provide adequate ventilation. Observe occupational exposure limits and minimize the risk of inhalation of vapours.

RESPIRATORY EQUIPMENT

No specific recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists.

HAND PROTECTION

Use suitable protective gloves if risk of skin contact.

EYE PROTECTION

If risk of splashing, wear safety goggles or face shield.

OTHER PROTECTION

Wear appropriate clothing to prevent any possibility of skin 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. Wash promptly if skin becomes wet or contaminated. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Liquid
COLOUR	Pink.
ODOUR	Characteristic.
SOLUBILITY	Soluble in water.
RELATIVE DENSITY	1.02
pH-VALUE, CONC. SOLUTION	>11

10 STABILITY AND REACTIVITY

STABILITY

Stable under normal temperature conditions.

CONDITIONS TO AVOID

Avoid excessive heat for prolonged periods of time.

HAZARDOUS DECOMPOSITION PRODUCTS

Fire creates: Carbon monoxide (CO). Carbon dioxide (CO₂).

11 TOXICOLOGICAL INFORMATION

INHALATION

In high concentrations, vapours may irritate throat and respiratory system and cause coughing.

INGESTION

May cause discomfort if swallowed.

SKIN CONTACT

Liquid may irritate skin.

EYE CONTACT

Spray and vapour in the eyes may cause irritation and smarting.

12 ECOLOGICAL INFORMATION

ECOTOXICITY

Not regarded as dangerous for the environment.

MOBILITY

The product is miscible with water. May spread in water systems.

13 DISPOSAL CONSIDERATIONS

GENERAL INFORMATION

Do not puncture or incinerate even when empty.

DISPOSAL METHODS

Dispose of waste and residues in accordance with local authority requirements.

14 TRANSPORT INFORMATION

ROAD TRANSPORT NOTES Not Classified

RAIL TRANSPORT NOTES Not classified.

SEA TRANSPORT NOTES Not classified.

AIR TRANSPORT NOTES Not classified.

15 REGULATORY INFORMATION

RISK PHRASES

NC Not classified.

SAFETY PHRASES

P13 Safety data sheet available for professional user on request.

STATUTORY INSTRUMENTS

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716).

APPROVED CODE OF PRACTICE

Classification and Labelling of Substances and Preparations Dangerous for Supply. Safety Data Sheets for Substances and Preparations.

GUIDANCE NOTES

Workplace Exposure Limits EH40. CHIP for everyone HSG(108).

16 OTHER INFORMATION

RISK PHRASES IN FULL

NC Not classified. , R20/22 Harmful by inhalation and if swallowed. , R41 Risk of serious damage to eyes.