

**[MATERIAL SAFETY DATA SHEET]**

According to 1907/2006 EEC (REACH), Article 31

Printing date 30.08.2013

Revision: 30.08.2013

1 Identification of the substance/preparation and of the company/undertaking· **Product details**· **Product name:** Muc-Off Brake Cleaner 400ml· **Article number:** 913· **Application of the substance / the preparation** Cleaner solvent· **Manufacturer/Supplier:**

Muc-Off Ltd
1st Floor, Unit 1,
Concept Office Park, Innovation Close,
Poole, Dorset, BH12 4QT, UK
Tel: +44 (0)1202 307790

· **Further information obtainable from:** ag@muc-off.com· **Information in case of emergency:**

During normal opening times 8.30am - 5.30pm Monday to Friday:
Tel: +44 (0)1202 307790

2 Hazards identification· **Hazard description:**

F+ Extremely flammable

· **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.

Has a narcotizing effect.

R 12 Extremely flammable.

R 66 Repeated exposure may cause skin dryness or cracking.

R 67 Vapours may cause drowsiness and dizziness.

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.

· **Classification system:**

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

3 Composition/information on ingredients· **Chemical characterization**· **Description:** Active substance with propellant· **Dangerous components:**

CAS: 64-17-5 EINECS: 200-578-6	ethanol	F; R 11	25-50%
CAS: 67-64-1 EINECS: 200-662-2	acetone	Xi, F; R 11-36-66-67	10-25%
CAS: 106-97-8 EINECS: 203-448-7	butane	F+; R 12	10-25%
CAS: 74-98-6 EINECS: 200-827-9	propane	F+; R 12	10-25%

(Contd. on page 2)

Health & Safety Sheet

According to 1907/2006 EEC (REACH), Article 31

Printing date 30.08.2013

Revision: 30.08.2013

Product name: Muc-Off Brake Cleaner 400ml

(Contd. of page 1)

CAS: 107-98-2 EINECS: 203-539-1	1-methoxy-2-propanol	R 10	2.5-10%
CAS: 123-86-4 EINECS: 204-658-1	n-butyl acetate	R 10-66-67	1.0-2.5%
CAS: 67-56-1 EINECS: 200-659-6	methanol	T, F; R 11-23/24/25-39/23/24/25	1.0-2.5%

· Ingredients according to detergents guideline 648/2004/EC

aliphatic hydrocarbons	15 - 30%
------------------------	----------

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 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. Then consult a doctor.
- **After swallowing:** Do not induce vomiting; call for medical help immediately.

5 Fire-fighting measures

- **Suitable extinguishing agents:**
 - Water haze
 - Fire-extinguishing powder
 - Carbon dioxide
 - Alcohol resistant foam
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Protective equipment:** Mount respiratory protective device.

6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:** Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:** Ensure adequate ventilation.

7 Handling and storage

- **Handling:**
- **Information 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.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
 - Store in a cool location.
 - Observe official regulations on storing packagings with pressurized containers.
- **Information about storage in one common storage facility:**
 - Observe official regulations on storing packagings with pressurized containers.
- **Further information about storage conditions:**
 - Keep receptacle tightly sealed.
 - Do not seal receptacle gas tight.
 - Store in cool, dry conditions in well sealed receptacles.

(Contd. on page 3)

GB

Health & Safety Sheet

According to 1907/2006 EEC (REACH), Article 31

Printing date 30.08.2013

Revision: 30.08.2013

Product name: Muc-Off Brake Cleaner 400ml

(Contd. of page 2)

Protect from heat and direct sunlight.

8 Exposure controls/personal protection

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

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

64-17-5 ethanol

WEL Long-term value: 1920 mg/m³, 1000 ppm

67-64-1 acetone

WEL Short-term value: 3620 mg/m³, 1500 ppm
Long-term value: 1210 mg/m³, 500 ppm

106-97-8 butane

WEL Short-term value: 1810 mg/m³, 750 ppm
Long-term value: 1450 mg/m³, 600 ppm
Carc (if more than 0.1% of buta-1.3-diene)

74-98-6 propane

OEL Short-term value: 3600 mg/m³, 2000 ppm
Long-term value: 1800 mg/m³, 1000 ppm

107-98-2 1-methoxy-2-propanol

WEL Short-term value: 560 mg/m³, 150 ppm
Long-term value: 375 mg/m³, 100 ppm
Sk

123-86-4 n-butyl acetate

WEL Short-term value: 966 mg/m³, 200 ppm
Long-term value: 724 mg/m³, 150 ppm

67-56-1 methanol

WEL Short-term value: 333 mg/m³, 250 ppm
Long-term value: 266 mg/m³, 200 ppm
Sk

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

· **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:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.



Protective gloves

Solvent resistant gloves

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

(Contd. on page 4)

GB

Health & Safety Sheet

According to 1907/2006 EEC (REACH), Article 31

Printing date 30.08.2013

Revision: 30.08.2013

Product name: Muc-Off Brake Cleaner 400ml

(Contd. of page 3)

· **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

· **Penetration time of glove material**

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

· **Eye protection:**



Tightly sealed goggles

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

9 Physical and chemical properties

· **General Information**

Form:	Aerosol
Colour:	According to product specification
Odour:	Characteristic

· **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: -44°C

· **Flash point:** -97°C

· **Ignition temperature:** 365.0°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: 1.5 Vol %

Upper: 15.0 Vol %

· **Vapour pressure at 20°C:** 8300.0 hPa

· **Density at 20°C:** 0.72300 g/cm³

· **Solubility in / Miscibility with water:**

Not miscible or difficult to mix.

· **Solvent content:**

Organic solvents: 99.8 %

10 Stability and reactivity

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

· **Dangerous reactions** No dangerous reactions known.

· **Dangerous decomposition products:** No dangerous decomposition products known.

(Contd. on page 5)

Health & Safety Sheet

According to 1907/2006 EEC (REACH), Article 31

Printing date 30.08.2013

Revision: 30.08.2013

Product name: Muc-Off Brake Cleaner 400ml

(Contd. of page 4)

11 Toxicological information

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

12 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.

13 Disposal considerations

- **Product:**
- **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

- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** 2 5F Gases.
- **Danger code (Kemler):** 23
- **UN-Number:** 1950
- **Packaging group:** -
- **Hazard label** 2.1
- **Description of goods:** 1950 AEROSOLS
- **Limited quantities (LQ)** LQ2
- **Maritime transport IMDG:**
- **IMDG Class:** 2.1
- **UN Number:** 1950
- **Label** 2.1
- **Packaging group:** -
- **EMS Number:** F-D,S-U
- **Marine pollutant:** No
- **Proper shipping name:** AEROSOLS
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** 2.1
- **UN/ID Number:** 1950
- **Label** 2.1
- **Packaging group:** -
- **Proper shipping name:** AEROSOLS, flammable

(Contd. on page 6)

Health & Safety Sheet

According to 1907/2006 EEC (REACH), Article 31

Printing date 30.08.2013

Revision: 30.08.2013

Product name: Muc-Off Brake Cleaner 400ml

(Contd. of page 5)

15 Regulatory information

· Labelling according to EU guidelines:

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

· Code letter and hazard designation of product:


F+ Extremely flammable

· Risk phrases:

12 Extremely flammable.
 66 Repeated exposure may cause skin dryness or cracking.
 67 Vapours may cause drowsiness and dizziness.

· Safety phrases:

2 Keep out of the reach of children.
 23 Do not breathe aerosol.
 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 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. Keep away from sources of ignition - No smoking.

Buildup of explosive mixtures possible without sufficient ventilation.

· National regulations:
· Technical instructions (air):

Class	Share in %
I	1,0-2,5
NK	50-100

· **Waterhazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

· **VOC-CH** 99.85 %

· **VOC-EU** 721.9 g/l

· **Danish MAL Code** 3-3

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 R-phrases

10 Flammable.
 11 Highly flammable.
 12 Extremely flammable.
 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
 36 Irritating to eyes.
 39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
 66 Repeated exposure may cause skin dryness or cracking.
 67 Vapours may cause drowsiness and dizziness.

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

· **Contact:** Adam Goudge