



Safety data sheet

According to 1907/2006 EEC Article 31

Printing date: 20.09.2016

Version: 3

Revision: 20.09.2016

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

- **1.1 Product identifier**
- **Trade name:** Muc-Off Foam Fresh
- **Article number:** 199
- **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** Surface cleaning
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 Muc-Off Ltd.
 Branksome Business Park, Unit 23, Bourne Valley Rd, Poole BH12 1DW
 Tel: +44 (0)1202 307790

 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.



GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.

- **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 GHS07

- **Signal word** Danger
- **Hazard statements**
 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.
 H319 Causes serious eye irritation.
- **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.

(Contd. on page 2)

Safety data sheet

According to 1907/2006 EEC Article 31

Printing date: 20.09.2016

Version: 3

Revision: 20.09.2016

Trade name: Muc-Off Foam Fresh

(Contd. of page 1)

- P251 Do not pierce or burn, even after use.
 P211 Do not spray on an open flame or other ignition source.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
 P403 Store in a well-ventilated place.
- **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:**

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	25-<50%
CAS: 67-63-0 EINECS: 200-661-7 Reg.nr.: 01-2119457558-25	propan-2-ol Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	2.5-<10%
CAS: 9002-92-0	Laureth-8 Eye Dam. 1, H318; Aquatic Acute 1, H400	1.0-<2.5%
CAS: 64-17-5 EINECS: 200-578-6 Reg.nr.: 01-2119457610-43	ethanol Flam. Liq. 2, H225; Eye Irrit. 2, H319	0.1-<1.0%

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

aliphatic hydrocarbons	≥ 30%
non-ionic surfactants, anionic surfactants, perfumes, (R)-p-mentha-1,8-diene, Pinene, CITRAL	< 5%

- **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. Then consult a doctor.
- **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

(Contd. on page 3)

Safety data sheet

According to 1907/2006 EEC Article 31

Printing date: 20.09.2016

Version: 3

Revision: 20.09.2016

Trade name: Muc-Off Foam Fresh

(Contd. of page 2)

- **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.

(Contd. on page 4)

GB

Safety data sheet

According to 1907/2006 EEC Article 31

Printing date: 20.09.2016

Version: 3

Revision: 20.09.2016

Trade name: Muc-Off Foam Fresh

(Contd. of page 3)

· 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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67-63-0 propan-2-ol

WEL	Short-term value: 1250 mg/m ³ , 500 ppm Long-term value: 999 mg/m ³ , 400 ppm
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64-17-5 ethanol

WEL	Long-term value: 1920 mg/m ³ , 1000 ppm
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· DNELs**67-63-0 propan-2-ol**

Oral	DNEL Long term-systemic	26 mg/kg bw/day (Consumer)
Dermal	DNEL Long term-systemic	319 mg/kg bw/day (Consumer)
		888 mg/kg bw/day (Worker)
Inhalative	DNEL Long term-systemic	89 mg/m ³ (Consumer)
		500 mg/m ³ (Worker)

· 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.**· 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:

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**

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

(Contd. on page 5)

Safety data sheet

According to 1907/2006 EEC Article 31

Printing date: 20.09.2016

Version: 3

Revision: 20.09.2016

Trade name: Muc-Off Foam Fresh

(Contd. of page 4)

· **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 at 20 °C:	9
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· Change in condition

· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	0 °C

· Flash point:	-60 °C
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· Self-igniting:	Product is not selfigniting.
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· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
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· Explosion limits:

· Lower:	1.5 Vol %
· Upper:	12.0 Vol %

· Vapour pressure at 20 °C:	2100 hPa
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· Density at 20 °C:	0.81 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.
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· Viscosity:

· Dynamic:	Not determined.
· Kinematic:	Not determined.

· Solvent content:

· Organic solvents:	35.2 %
· Water:	62.2 %

· Solids content:	0.9 %
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· 9.2 Other information	No further relevant information available.
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SECTION 10: Stability and reactivity

· 10.1 Reactivity	No further relevant information available.
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· 10.2 Chemical stability	
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· Thermal decomposition / conditions to be avoided:	No decomposition if used according to specifications.
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· 10.3 Possibility of hazardous reactions	No dangerous reactions known.
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· 10.4 Conditions to avoid	No further relevant information available.
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· 10.5 Incompatible materials:	No further relevant information available.
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(Contd. on page 6)

Safety data sheet

According to 1907/2006 EEC Article 31

Printing date: 20.09.2016

Version: 3

Revision: 20.09.2016

Trade name: Muc-Off Foam Fresh

(Contd. of page 5)

· **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:

67-63-0 propan-2-ol

Oral	LD50	5840 mg/kg (rat)
Dermal	LD50	13900 mg/kg (rabbit)
Inhalative	LC50/6h	25000 mg/m ³ (rat)

9002-92-0 Laureth-8

Oral	LD50	8600 mg/kg (rat)
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- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **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** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

67-63-0 propan-2-ol

LOEC (8 days)	1000 mg/l (algae)
LC50/96h	9640 mg/l (Pimephales promelas)
LC50 (24h)	9714 mg/l (Daphnia magna)

- **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 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.
- **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.

(Contd. on page 7)

Safety data sheet

According to 1907/2006 EEC Article 31

Printing date: 20.09.2016

Version: 3

Revision: 20.09.2016

Trade name: Muc-Off Foam Fresh

(Contd. of page 6)

- **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.

(Contd. on page 8)

Safety data sheet

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Version: 3

Revision: 20.09.2016

Trade name: Muc-Off Foam Fresh

(Contd. of page 7)

· 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

· National regulations:

Class	Share in %
Wasser	50-<75
NK	25-<50

- VOC-CH 35.18 %
- VOC-EU 285.1 g/l
- Danish MAL Code 4-3
- 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.
- H225 Highly flammable liquid and vapour.
- H280 Contains gas under pressure; may explode if heated.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H336 May cause drowsiness or dizziness.
- H400 Very toxic to aquatic life.

· 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 Organisation
- 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

(Contd. on page 9)

Safety data sheet

According to 1907/2006 EEC Article 31

Printing date: 20.09.2016

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Revision: 20.09.2016

Trade name: Muc-Off Foam Fresh

(Contd. of page 8)

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

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

DNEL: Derived No-Effect Level (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Flam. Gas 1: Flammable gases – Category 1

Aerosol 1: Aerosols – Category 1

Press. Gas C: Gases under pressure – Compressed gas

Flam. Liq. 2: Flammable liquids – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

GB



[MATERIAL SAFETY DATA SHEET]

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II and Regulation (EC) No. 1272/2008 (CLP) - United Kingdom (UK)

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Identification of the substance or mixture

- Product name** : Muc Off Screen Cleaner/Muc Off Helmet & Visor Cleaner (3/161/1)
Code : HKGH00964964
Product type : Liquid.
Use of the substance/mixture : Cleaner for devise, hemlets & visor screen / surface cleaning (Two packaging: 35 ml & 250 ml)

Company/undertaking identification

- Importer** : Muc-Off Ltd
1st Floor, Unit 1,
Concept Office Park, Innovation Close,
Poole, Dorset,
BH12 4QT
UK
- e-mail address of person responsible for this SDS** : ag@muc-off.com
- Emergency telephone number (with hours of operation)** : +44 (0) 1202 307 790 (Hours of Operation: 09:00 - 17:00 Mon-Fri)

2. HAZARDS IDENTIFICATION

The product is not classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification according to Regulation (EC) 1907/2006 (REACH)

- Classification** : Not classified.

See section 11 for more detailed information on health effects and symptoms.

3. COMPOSITION/INFORMATION ON INGREDIENTS

- Substance/mixture** : Mixture

There are no ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. FIRST AID MEASURES

First-aid measures

- Inhalation** : Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.
- Notes to physician** : No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

See section 11 for more detailed information on health effects and symptoms.

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : In a fire or if heated, a pressure increase will occur and the container may burst. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Hazardous thermal decomposition products : No specific data.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Put on appropriate personal protective equipment (see section 8).

Environmental precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. HANDLING AND STORAGE

Handling : Put on appropriate personal protective equipment (see section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking.

Storage : Store between the following temperatures: 5 to 25°C (41 to 77°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Packaging materials

Recommended : Use original container.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limit values

No exposure limit value known.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

Exposure controls

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- Occupational exposure controls** : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Eye protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
- Skin protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. PHYSICAL AND CHEMICAL PROPERTIES

General information

Appearance

Physical state : Liquid. [Translucent]

Important health, safety and environmental information

pH : 6.5 to 7.5

Relative density : 1.0029

10. STABILITY AND REACTIVITY

- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : No specific data.
- Materials to avoid** : No specific data.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. TOXICOLOGICAL INFORMATION

Toxicokinetics

- Absorption** : Not available.
- Distribution** : Not available.
- Metabolism** : Not available.
- Elimination** : Not available.

Potential acute health effects

- Inhalation** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Eye contact** : No known significant effects or critical hazards.

Acute toxicity

11. TOXICOLOGICAL INFORMATION

Conclusion/Summary	: Not available.
<u>Potential chronic health effects</u>	
<u>Chronic toxicity</u>	
Conclusion/Summary	: Not available.
<u>Irritation/Corrosion</u>	
Conclusion/Summary	: Not available.
<u>Sensitiser</u>	
Conclusion/Summary	: Not available.
<u>Carcinogenicity</u>	
Conclusion/Summary	: Not available.
<u>Mutagenicity</u>	
Conclusion/Summary	: Not available.
<u>Teratogenicity</u>	
Conclusion/Summary	: Not available.
<u>Reproductive toxicity</u>	
Conclusion/Summary	: Not available.
Chronic effects	: No known significant effects or critical hazards.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Teratogenicity	: No known significant effects or critical hazards.
Developmental effects	: No known significant effects or critical hazards.
Fertility effects	: No known significant effects or critical hazards.
<u>Over-exposure signs/symptoms</u>	
Inhalation	: No specific data.
Ingestion	: No specific data.
Skin	: No specific data.
Eyes	: No specific data.









12. ECOLOGICAL INFORMATION

Ecotoxicity	: No known significant effects or critical hazards.
<u>Aquatic ecotoxicity</u>	
Conclusion/Summary	: Not available.
<u>Other ecological information</u>	
<u>Persistence/degradability</u>	
Conclusion/Summary	: Not available.
Other adverse effects	: No known significant effects or critical hazards.
PBT	: Not applicable.
vPvB	: Not applicable.

13. DISPOSAL CONSIDERATIONS

Methods of disposal	: The generation of waste should be avoided or minimised wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers .
Hazardous waste	: Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 91/689/EEC.

14. TRANSPORT INFORMATIONInternational transport regulations

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
ADR/RID Class	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (5-chloro-2-methyl-2H-isothiazol-3-one)	9	III	 	-
ADN/ADNR Class	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (quaternary ammonium compounds, benzyl-c12-c16-alkyldimethyl, chlorides)	9	III	 	-
IMDG Class	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (quaternary ammonium compounds, benzyl-c12-c16-alkyldimethyl, chlorides). Marine pollutant (quaternary ammonium compounds, benzyl-c12-c16-alkyldimethyl, chlorides)	9	III	 	-
IATA Class	UN3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (quaternary ammonium compounds, benzyl-c12-c16-alkyldimethyl, chlorides)	9	III	 	-

PG* : Packing group

15. REGULATORY INFORMATION

Chemical Safety Assessment : This product contains substances for which Chemical Safety Assessments are still required.

EU regulationsClassification and labeling according to Regulation (EC) 1907/2006 (REACH)

Classification and labeling have been determined according to EU Directives 67/548/EEC and 1999/45/EC (including amendments) and take into account the intended product use.

Risk phrases : This product is not classified according to EU legislation.

Product use : Consumer applications.

Europe inventory : Not determined.

Black List Chemicals : Not listed

Priority List Chemicals : Not listed

Integrated pollution prevention and control list (IPPC) - Air : Not listed

Integrated pollution prevention and control list (IPPC) - Water : Not listed

15. REGULATORY INFORMATION

International regulations

Chemical Weapons Convention: Not listed
List Schedule I Chemicals

Chemical Weapons Convention: Not listed
List Schedule II Chemicals

Chemical Weapons Convention: Not listed
List Schedule III Chemicals

16. OTHER INFORMATION

Classification according to Regulation (EC) 1272/2008 (CLP) : AQUATIC TOXICITY (ACUTE) - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 98.8%

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 98.8%

Restrictions on use

None identified.

History

Date of printing : 3/10/2010.

Date of issue/ Date of revision : 3/10/2010.

Date of previous issue : 3/9/2010.

Version : 1.01

✔ Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Annex



[MATERIAL SAFETY DATA SHEET]

1. Identification of the Substance/Preparation & Supplier.

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

Product Name: Muc-Off Premium Anti-Fog Treatment 35ml
Product Code: 214

2. Composition/Information on Ingredients.

Chemical Characterisation: comb, anionic and non-ionogenic substances with a mixture of alcohol

Form: Liquid
Colour: Light Yellowish
Smell: Perfumed

3. Hazards Identification.

Description of dangers: Moderate irritation of mucosa, acutely non-toxic
No special health hazard when used correctly.

Safety Risks: Avoid contact with mucosa
Keep away from eyes.

4. First Aid Measures.

Eye Contact: Flush with clean water for 15minutes. If irritation persists, obtain medical attention.
Ingestion: Water to drink and rinse may be beneficial.

Consult a doctor if necessary.

5. Fire Fighting Measures:

Suitable quenchers:	Foam, sand or soil
Unsuitable quenchers from the safety point of view:	Do not use a strong water jet.
Special danger from the material or product of combustion:	None.
Special protective equipment for the fighting:	See point 8.

6. Accidental Release Measures.

When spilling or overflowing occurs, take up with liquid binding substance.
Additional instructions: None.

7. Handling and Storage.

Storage Precautions: Frost proof storage.
Handling: Avoid contact with mucosa.

8. Exposure Controls/Personal Protection.

Additional instructions to the lay-out of technical plants:

Constituents to be monitored with limiting values specific to work station: None.
The product does not contain any constituents to be monitored with limiting values specific to work station.

9. Physical and Chemical Properties.

9.1	Cloudpoint	approx. 0 C
9.2	Density (20 C)	approx. 1.01 g /cm
9.3	Vapour pressure (20 C)	<0.02 mbar
9.4	Viscosity (20 C)	4.1mm /s
9.5	Solubility in water	unlimited
9.6	pH value (undiluted)	approx. 7 – 7.5
9.7	Flash point	> 90 C
9.8	Thermal disintegration	no disintegration when used properly
9.9	Dangerous reactions	none, when handled properly

10. Stability and Reactivity.

Conditions to Avoid: Stable when used in compliance with instructions
Materials to be avoided: None.

11. Toxicological Information.

Moderate irritation of mucosa, acutely non-toxic.

12. Ecological Information.

The product is quickly biodegradable and thus fulfils the legal requirements of primary degradation pursuant to the orders of the German detergent legislation (version dated 4 June 1986) To be classified as readily biodegradable under OECD classification.

13. Disposal Recommendations.

Product: Can be led into a biological sewage treatment plant under compliance with the official regulations.
Packaging: Dual use, i.e. recycable

14. Transport Information.

Not Classified.

15. Regulatory Information.

The product is not a preparation subject to any compulsory identification in the sense of hazardous substance ordinance dated 23.12.2004

16. Other Information.**Legal Disclaimer:**

The information supplied above is based upon the present state of our knowledge of the product at the time of publication. It is given in good faith and no warranty is implied with respect to the specification or quality of the product. The user must satisfy himself that the product is entirely suitable for his purpose.