



Safety Data Sheet

acc. to OSHA HCS

Printing date 09/13/2017

Reviewed on 09/13/2017

1 Identification

- **Product identifier**
- **Trade name:** Muc-Off Foam Fresh (Low VOC)
- **Article number:** 199US
- **Application of the substance / the mixture** Fabric refresher
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Muc-Off Ltd
Unit 1, 1st Floor, Concept Office Park
Innovation Close, Poole, Dorset, BH12 4QT
Tel: +44 (0) 1202 307790
Fax: +44 (0) 1202 746853
E-mail: info@muc-off.com
- **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-H229 Extremely flammable aerosol. Pressurized container: May burst if heated.

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



GHS02

- **Signal word** Danger
- **Hazard statements**
H222-H229 Extremely flammable aerosol. Pressurized container: May burst if heated.
- **Precautionary statements**
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Pressurized container: Do not pierce or burn, even after use.
P261 Avoid breathing spray.
P280 Wear eye protection / face protection.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P403 Store in a well-ventilated place.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 0
Fire = 4
Reactivity = 3

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· WHMIS-ratings (scale 0 - 4)

HEALTH	0	Health = 0
FIRE	4	Fire = 4
REACTIVITY	3	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:

CAS: 67-63-0 Reg.nr.: 01-2119457558-25	propan-2-ol	2.5-<10%
CAS: 106-97-8 Reg.nr.: 01-2119474691-32	butane (containing < 0.1% butadiene (203-450-8))	2.5-<10%
CAS: 74-98-6 Reg.nr.: 01-2119486944-21	propane	2.5-<10%

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. Then consult a doctor.
- 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
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.

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· 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:

67-63-0	propan-2-ol	400 ppm
106-97-8	butane (containing < 0.1% butadiene (203-450-8))	5500* ppm
74-98-6	propane	5500* ppm
577-11-7	docusate sodium	5.7 mg/m3
64-17-5	ethanol	1,800 ppm
5989-27-5	(R)-p-mentha-1,8-diene	15 ppm
111-42-2	diethanolamine	3 mg/m3

· PAC-2:

67-63-0	propan-2-ol	2000* ppm
106-97-8	butane (containing < 0.1% butadiene (203-450-8))	17000** ppm
74-98-6	propane	17000** ppm
577-11-7	docusate sodium	63 mg/m3
64-17-5	ethanol	3300* ppm
5989-27-5	(R)-p-mentha-1,8-diene	67 ppm
111-42-2	diethanolamine	28 mg/m3

· PAC-3:

67-63-0	propan-2-ol	12000** ppm
106-97-8	butane (containing < 0.1% butadiene (203-450-8))	53000*** ppm
74-98-6	propane	33000*** ppm
577-11-7	docusate sodium	380 mg/m3
64-17-5	ethanol	15000* ppm
5989-27-5	(R)-p-mentha-1,8-diene	170 ppm
111-42-2	diethanolamine	130 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.

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- **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:

67-63-0 propan-2-ol

PEL	Long-term value: 980 mg/m ³ , 400 ppm
REL	Short-term value: 1225 mg/m ³ , 500 ppm
	Long-term value: 980 mg/m ³ , 400 ppm
TLV	Short-term value: 984 mg/m ³ , 400 ppm
	Long-term value: 492 mg/m ³ , 200 ppm
	BEI

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

REL	Long-term value: 1900 mg/m ³ , 800 ppm
TLV	Short-term value: 2370 mg/m ³ , 1000 ppm (EX)

74-98-6 propane

PEL	Long-term value: 1800 mg/m ³ , 1000 ppm
REL	Long-term value: 1800 mg/m ³ , 1000 ppm
TLV	refer to Appendix F in TLVs&BEIs book; D, EX

· Ingredients with biological limit values:

67-63-0 propan-2-ol

BEI	40 mg/L
	Medium: urine
	Time: end of shift at end of workweek
	Parameter: Acetone (background, nonspecific)

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:** 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

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· 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 through 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:	Whitish
Odor:	Characteristic
Odor threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	-44.5 °C (-48.1 °F)

· Flash point: -97 °C (-142.6 °F)

· Flammability (solid, gaseous): Not applicable.

· 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:	Not determined.
Upper:	Not determined.

· Vapor pressure: Not determined.

· Density at 20 °C (68 °F): 0.95 g/cm³ (7.93 lbs/gal)

· Relative density: Not determined.

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· 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:	14.1 %
Water:	84.8 %
· Solids content:	0.2 %
· 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:**

67-63-0 propan-2-ol

Oral	LD50	5,840 mg/kg (rat)
Dermal	LD50	13,900 mg/kg (rabbit)
Inhalative	LC50/6h	25,000 mg/m3 (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)**

67-63-0	propan-2-ol	3
64-17-5	ethanol	1
5989-27-5	(R)-p-mentha-1,8-diene	3
111-42-2	diethanolamine	2B

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

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· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

· Toxicity

· Aquatic toxicity:

67-63-0 propan-2-ol

LOEC (8 days)	1,000 mg/l (algae)
LC50/96h	9,640 mg/l (Pimephales promelas)
LC50 (24h)	9,714 mg/l (Daphnia magna)

· 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.

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

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· 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
 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

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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):

67-63-0 propan-2-ol

· TSCA (Toxic Substances Control Act):

67-63-0 propan-2-ol

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

74-98-6 propane

577-11-7 docusate sodium

68155-07-7 AMIDES, C8-18(EVEN NUMBERED) AND C18-UNSATD., N,N-BIS(HYDROXYETHYL)

7732-18-5 Water

· 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)

None of the ingredients is listed.

· TLV (Threshold Limit Value established by ACGIH)

67-63-0 propan-2-ol

A4

64-17-5 ethanol

A3

111-42-2 diethanolamine

A3

80-56-8 Pinene

A4

· MAK (German Maximum Workplace Concentration)

64-17-5 ethanol

5

111-42-2 diethanolamine

3B

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

None of the ingredients is listed.

· National regulations:

Class	Share in %
Wasser	75-<100
NK	10-<25

- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

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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.

· **Date of preparation / last revision** 09/13/2017 / 1

· **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

BEI: Biological Exposure Limit

Flam. Aerosol 1: Aerosols – Category 1