



MUC-OFF ANTI FOG

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Issue date: 15/05/2015 Revision date: 5/11/2022 Supersedes version of: 11/8/2019 Version: 3.00

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

1.1. Product identifier

Product form	: Mixture
Name	: Muc-Off Anti Fog
Product code	: 214-1
Type of product	: Detergent

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

No additional information available

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Muc-Off Ltd

UK - Muc-Off Ltd, Unit 23 Branksome Business Park, Bourne Valley Road, Poole, Dorset, BH12 1DW

EU- Muc-Off Ltd, Unit 3D North Point House, North Point Business Park, New Mallow Road, Cork, Ireland, T23 AT2P

Tel: +44(0)1202 307790

E-mail info@muc-off.com

1.4. Emergency telephone number

Emergency number NHS 111/NHS 24/NHS Direct 111 / 0845 4647 or call a doctor

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

EUH-statements : EUH210 - Safety data sheet available on request.

2.3. Other hazards

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Comments : Aqueous formulation based on organic solvents and on surfactants

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
propan-2-ol; isopropyl alcohol; isopropanol substance with national workplace exposure limit(s) (GB)	CAS-No.: 67-63-0 EC-No.: 200-661-7 EC Index-No.: 603-117-00-0 REACH-no: 01-2119457558-25	1 – 10	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
1-methoxy-2-propanol; monopropylene glycol methyl ether substance with national workplace exposure limit(s) (GB); substance with a Community workplace exposure limit	CAS-No.: 107-98-2 EC-No.: 203-539-1 EC Index-No.: 603-064-00-3 REACH-no: 01-2119457435-35	1 – 5	Flam. Liq. 3, H226 STOT SE 3, H336

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Remove soiled clothing.

First-aid measures after inhalation : Allow affected person to breathe fresh air. Upon irritation of the respiratory tract or mucous membranes (e.g. coughing), indisposition or prolonged exposure, consult a doctor.

First-aid measures after skin contact : Wash contaminated skin areas thoroughly with soap and water. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse immediately with plenty of water, also under the eyelids. If symptoms, consult ophthalmologist.

First-aid measures after ingestion : Clean mouth with water and drink plenty of water afterwards. If you feel unwell, seek medical advice.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects : No information available.

4.3. Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2), water spray, sand, earth.

Unsuitable extinguishing media : high volume water jet.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Vapours are heavier than air and spread at the soil. Pay attention to flashback.

Explosion hazard : Large quantities: Vapours may form explosive mixture with air.

5.3. Advice for firefighters

Protection during firefighting : In the event of fire and/or explosion, do not breathe in fumes. Wear self-contained breathing apparatus for fire fighting, if necessary.

Other information : Water mist may be used to cool closed containers. Contaminated extinguishing water and soil must be disposed of in accordance with official regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid contact with skin and eyes. Slipping hazard due to leakage.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Large quantities: Soak up with inert absorbent material. Dispose of the material collected according to regulations.

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6.4. Reference to other sections

Suitable protective equipment: see section 8. Refer to safety instructions (see sections 7 and 8). Dispose of as described in section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : No special action required if used correctly. Do not empty container with pressure, it is not a pressurised container.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store sealed in the original container. Keep containers tightly closed in a cool, well-ventilated place. Protect from heat and direct sunlight.

Heat and ignition sources : Keep away from naked flames/heat.

Information on mixed storage : Store away from strong oxidizers, strong bases, strong acids.

7.3. Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

propan-2-ol; isopropyl alcohol; isopropanol (67-63-0)	
United Kingdom - Occupational Exposure Limits	
Local name	Propan-2-ol
WEL TWA (OEL TWA) [1]	999 mg/m ³
WEL TWA (OEL TWA) [2]	400 ppm
WEL STEL (OEL STEL)	1250 mg/m ³
WEL STEL (OEL STEL) [ppm]	500 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
1-methoxy-2-propanol; monopropylene glycol methyl ether (107-98-2)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	1-Methoxypropan-2-ol
IOEL TWA [ppm]	100 ppm
IOEL STEL	568 mg/m ³
IOEL STEL [ppm]	150 ppm
Remark	Skin
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
United Kingdom - Occupational Exposure Limits	
Local name	1-Methoxypropan-2-ol
WEL TWA (OEL TWA) [1]	375 mg/m ³
WEL TWA (OEL TWA) [2]	100 ppm
WEL STEL (OEL STEL)	560 mg/m ³
WEL STEL (OEL STEL) [ppm]	150 ppm
Remark	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

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8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

Hand protection:

No special measures are necessary when normal, good hygiene is practised. In the case of lengthy skin contact: Protective gloves made of PVC

Eye protection:

Not required. In case of risk of splashing, wear protective glasses.

Skin and body protection:

Not required under normal use.

Respiratory protection:

Not required under normal use.

Other information:

Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: yellowish-orange.
Odour	: Not available
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not available
Explosive limits	: Not available
Lower explosive limit (LEL)	: Not available
Upper explosive limit (UEL)	: Not available
Flash point	: > 90 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: ≈ 7.5
Viscosity, kinematic	: 4.1 mm²/s
Solubility	: completely miscible with: water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: < 0.02 hPa 20 °C
Vapour pressure at 50 °C	: Not available
Density	: Not available
Relative density	: 1.01
Relative vapour density at 20 °C	: Not available
Particle size	: Not applicable
Particle size distribution	: Not applicable
Particle shape	: Not applicable
Particle aspect ratio	: Not applicable
Particle aggregation state	: Not applicable
Particle agglomeration state	: Not applicable
Particle specific surface area	: Not applicable
Particle dustiness	: Not applicable

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9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under proper storage and handling.

10.3. Possibility of hazardous reactions

No dangerous reactions known.

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

propan-2-ol; isopropyl alcohol; isopropanol (67-63-0)

LD50 oral rat	5840 mg/kg ECHA Registration Dossier 06.2019
LD50 oral	4396 mg/kg bodyweight
LD50 dermal rat	12800 mg/kg
LD50 dermal rabbit	13900 mg/kg ECHA Registration Dossier 06.2019
LD50 dermal	12800 mg/kg bodyweight
LC50 Inhalation - Rat (Dust/Mist)	46600 mg/l
LC50 Inhalation - Rat (Vapours)	72.6 mg/l/4h

Sodium diisooctyl sulfosuccinate (577-11-7)

LD50 oral rat	> 3100 mg/kg ECHA Registration Dossier 06.2019
LD50 oral	4620 mg/kg bodyweight
LD50 dermal rabbit	> 10000 mg/kg ECHA Registration Dossier 06.2019
LD50 dermal	> 10000 mg/kg bodyweight
LC50 Inhalation - Rat (Dust/Mist)	20000 mg/l

fat alcohol polyglycolether (9043-30-5)

LD50 oral rat	1940 mg/kg
LD50 dermal rabbit	> 2000 mg/kg SDB Calbe Chemie 04.2018

1-methoxy-2-propanol; monopropylene glycol methyl ether (107-98-2)

LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: EU Method B.3 (Acute Toxicity (Dermal))
LD50 dermal rabbit	11000 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	> 26315 mg/l

Skin corrosion/irritation : Not classified
pH: ≈ 7.5

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Serious eye damage/irritation	: Not classified pH: \approx 7.5
Additional information	: Contact with eyes may result in irritation.
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified

propan-2-ol; isopropyl alcohol; isopropanol (67-63-0)

STOT-single exposure	May cause drowsiness or dizziness.
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1-methoxy-2-propanol; monopropylene glycol methyl ether (107-98-2)

STOT-single exposure	May cause drowsiness or dizziness.
STOT-repeated exposure	: Not classified

Sodium diisooctyl sulphosuccinate (577-11-7)

NOAEL (oral, rat, 90 days)	> 1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents), Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents)
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1-methoxy-2-propanol; monopropylene glycol methyl ether (107-98-2)

LOAEL (oral, rat, 90 days)	2757 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)
NOAEL (oral, rat, 90 days)	919 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)
NOAEL (dermal, rat/rabbit, 90 days)	> 1000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)

Aspiration hazard	: Not classified
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Viscosity, kinematic	4.1 mm ² /s
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11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute)	: Not classified
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Hazardous to the aquatic environment, long-term (chronic)	: Not classified
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propan-2-ol; isopropyl alcohol; isopropanol (67-63-0)

LC50 - Fish [1]	1400 mg/l
LC50 - Fish [2]	9640 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	13299 mg/l
EC50 - Other aquatic organisms [1]	13299 mg/l waterflea
EC50 - Other aquatic organisms [2]	> 1000 mg/l
ErC50 algae	> 1000 mg/l

Sodium diisooctyl sulphosuccinate (577-11-7)

LC50 - Fish [1]	28 mg/l
EC50 - Crustacea [1]	10.3 mg/l Daphnia magna SDB Sigma-Aldrich 04.2016
EC50 - Other aquatic organisms [1]	36 mg/l waterflea
EC50 72h - Algae [1]	39.3 mg/l Desmodesmus subspicatus SDB Sigma-Aldrich 04.2016

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fat alcohol polyglycoether (9043-30-5)

LC50 - Fish [1]	> 1.1 mg/l Danio rerio SDB Sigma-Aldrich 06.2017
EC50 - Crustacea [1]	1 – 10 mg/l Daphnia magna SDB Calbe Chemie 04.2018
EC50 72h - Algae [1]	1 – 10 mg/l Desmodemus subspicatus SDB Calbe Chemie 04.2018

1-methoxy-2-propanol; monopropylene glycol methyl ether (107-98-2)

LC50 - Fish [1]	4600 – 10000
EC50 - Crustacea [1]	> 500 mg/l
EC50 - Other aquatic organisms [1]	2954 mg/l Test organisms (species): other aquatic crustacea:
EC50 - Other aquatic organisms [2]	> 500 mg/l
ErC50 algae	> 1000 mg/l

12.2. Persistence and degradability

MUC-OFF ANTI FOG	
Persistence and degradability	The surface active substances of the product correspond to the requirements of the EC Detergent Regulation (EC/648/2004) concerning ultimate aerobic biodegradation of tensides for washing and cleaning agents.

12.3. Bioaccumulative potential

propan-2-ol; isopropyl alcohol; isopropanol (67-63-0)	
Partition coefficient n-octanol/water (Log Pow)	0.05
Sodium diisooctyl sulphosuccinate (577-11-7)	
Bioconcentration factor (BCF REACH)	3.78 SDB Sigma-Aldrich 04.2016
Partition coefficient n-octanol/water (Log Pow)	6.1
1-methoxy-2-propanol; monopropylene glycol methyl ether (107-98-2)	
Partition coefficient n-octanol/water (Log Pow)	-0.437

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Other adverse effects : No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

European List of Waste (LoW) code : 07 06 01* - aqueous washing liquids and mother liquors

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
not regulated	not regulated	not restricted	not regulated	not regulated
14.2. UN proper shipping name				
not regulated	not regulated	not restricted	not regulated	not regulated
14.3. Transport hazard class(es)				
not regulated	not regulated	not restricted	not regulated	not regulated
14.4. Packing group				
	-			
14.5. Environmental hazards				
Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
Marine pollutant : No				
No supplementary information available				

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14.6. Special precautions for user

Overland transport

No data available

Transport by sea

No data available

Air transport

No data available

Inland waterway transport

No data available

Rail transport

No data available

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

VOC content : ≤ 10 %

Detergent Regulation (648/2004/EC): Ingredient data sheet:

Component	CAS-No.	%
ISOPROPYL ALCOHOL	67-63-0	1 - 10%
METHOXYISOPROPANOL	107-98-2	1 - 10%
DIETHYLHEXYL SODIUM SULFOSUCCINATE	577-11-7	0.1 - 1%
fat alcohol polyglycoether	9043-30-5	0.1 - 1%

Detergent Regulation : Labelling of contents::

Component	%
anionic surfactants	<5%

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Indication of changes:

Section 1, 2, 3, 8, 11, 12, 15.

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Abbreviations and acronyms:

n.a. = not applicable; n.d.= not determined

Full text of H- and EUH-statements:

EUH210	Safety data sheet available on request.
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis

The classification complies with : ATP 12

Other information :

The information is based on present levels of our knowledge. It does not, however, give assurances of product properties and establishes no contract legal rights. Existing laws and regulations are the responsibility of the recipient of our products.