



Muc-Off One-Shot Anti-Viral Grenade

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Issue date: 02/06/2015 Revision date: 13/10/2023 Version: 2.0

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

1.1. Product identifier

Product form	: Mixture
Product name	: Muc-Off One-Shot Anti-Viral Grenade
Product code	: 20257
Type of product	: Biocidal products (e.g. Disinfectants, pest control)
Vaporizer	: Aerosol
Product group	: End product
UFI	: GNV1-K03W-J00H-6N44

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

1.2.1. Relevant identified uses

Main use category	: Consumer use, Professional use
Use of the substance/mixture	: Pesticides, non-agricultural (Biocides)
Function or use category	: Pesticides, non-agricultural (Biocides)

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 Email: info@muc-off.com

1.4. Emergency telephone number

Emergency number

Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	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]

Aerosol, Category 1 H222;H229

Serious eye damage/eye irritation, Category 2 H319

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

Adverse physicochemical, human health and environmental effects

Pressurised container: May burst if heated. Extremely flammable aerosol. Causes serious eye irritation.

2.2. Label elements

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

Hazard pictograms (CLP)



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Signal word (CLP)	: Danger
Hazard statements (CLP)	: H222 - Extremely flammable aerosol. H229 - Pressurised container: May burst if heated. H319 - Causes serious eye irritation.
Precautionary statements (CLP)	: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P211 - Do not spray on an open flame or other ignition source. P251 - Do not pierce or burn, even after use. P280 - Wear eye protection. P337+P313 - If eye irritation persists: Get medical advice/attention. P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C.

2.3. Other hazards

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ETHANOL substance with national workplace exposure limit(s) (GB)	CAS-No.: 64-17-5 EC-No.: 200-578-6 EC Index-No.: 603-002-00-5 REACH-no: 01-2120102843-65	30 – 50	Flam. Liq. 2, H225 Eye Irrit. 2, H319
BUTANE	CAS-No.: 106-97-8 EC-No.: 203-448-7 EC Index-No.: 601-004-00-0	10 – 30	Flam. Gas 1, H220
PROPANE	CAS-No.: 74-98-6 EC-No.: 200-827-9 EC Index-No.: 601-003-00-5	10 – 30	Flam. Gas 1, H220
ISOBUTANE	CAS-No.: 75-28-5 EC-No.: 200-857-2 EC Index-No.: 601-004-00-0	10 – 30	Flam. Gas 1, H220
DIDECYLDIMETHYL AMMONIUM CHLORIDE	CAS-No.: 7173-51-5 EC-No.: 230-252-2	< 1	Acute Tox. 4 (Oral), H302 Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 2, H411
2-(2-BUTOXYETHOXY)ETHANOL substance with national workplace exposure limit(s) (GB); substance with a Community workplace exposure limit	CAS-No.: 112-34-5 EC-No.: 203-961-6 EC Index-No.: 603-096-00-8 REACH-no: 01-2119475104-44	< 1	Eye Irrit. 2, H319
PROPAN-2-OL 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	< 1	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
3-IODO-2-PROPYNYL BUTYLCARBAMATE	CAS-No.: 55406-53-6 EC-No.: 259-627-5 EC Index-No.: 616-212-00-7	< 1	Acute Tox. 3 (Inhalation), H331 Acute Tox. 4 (Oral), H302 STOT RE 1, H372 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410
2-AMINOETHANOL substance with national workplace exposure limit(s) (GB); substance with a Community workplace exposure limit	CAS-No.: 141-43-5 EC-No.: 205-483-3 EC Index-No.: 603-030-00-8 REACH-no: 01-2119486455-28	< 1	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Chronic 3, H412

Specific concentration limits:		
Name	Product identifier	Specific concentration limits
2-AMINOETHANOL	CAS-No.: 141-43-5 EC-No.: 205-483-3 EC Index-No.: 603-030-00-8 REACH-no: 01-2119486455-28	(5 ≤C ≤ 100) STOT SE 3, H335

Product subject to CLP Article 1.1.3.7. The disclosure rules of the components is modified in this case.

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 after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after eye contact : Eye irritation.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Extremely flammable aerosol.
Explosion hazard : Pressurised container: May burst if heated.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

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5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Mechanically recover the product.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Avoid contact with skin and eyes. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F. Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

BUTANE (106-97-8)

United Kingdom - Occupational Exposure Limits

Local name	Butane
WEL TWA (OEL TWA) [1]	1450 mg/m ³
WEL TWA (OEL TWA) [2]	600 ppm

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BUTANE (106-97-8)	
WEL STEL (OEL STEL)	1810 mg/m ³
WEL STEL (OEL STEL) [ppm]	750 ppm
Remark	Carc (Capable of causing cancer and/or heritable genetic damage, only applies if Butane contains more than 0.1% of buta-1,3-diene)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
PROPAN-2-OL (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
2-(2-BUTOXYETHOXY)ETHANOL (112-34-5)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	2-(2-Butoxyethoxy)ethanol
IOEL TWA [ppm]	10 ppm
IOEL STEL	101.2 mg/m ³
IOEL STEL [ppm]	15 ppm
Regulatory reference	COMMISSION DIRECTIVE 2006/15/EC
United Kingdom - Occupational Exposure Limits	
Local name	2-(2-Butoxyethoxy)ethanol
WEL TWA (OEL TWA) [1]	67.5 mg/m ³
WEL TWA (OEL TWA) [2]	10 ppm
WEL STEL (OEL STEL)	101.2 mg/m ³
WEL STEL (OEL STEL) [ppm]	15 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
2-AMINOETHANOL (141-43-5)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	2-Aminoethanol
IOEL TWA [ppm]	1 ppm
IOEL STEL	7.6 mg/m ³
IOEL STEL [ppm]	3 ppm
Remark	Skin
Regulatory reference	COMMISSION DIRECTIVE 2006/15/EC
United Kingdom - Occupational Exposure Limits	
Local name	2-Aminoethanol
WEL TWA (OEL TWA) [1]	2.5 mg/m ³
WEL TWA (OEL TWA) [2]	1 ppm

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2-AMINOETHANOL (141-43-5)	
WEL STEL (OEL STEL)	7.6 mg/m ³
WEL STEL (OEL STEL) [ppm]	3 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

ETHANOL (64-17-5)	
United Kingdom - Occupational Exposure Limits	
Local name	Ethanol
WEL TWA (OEL TWA) [1]	1920 mg/m ³
WEL TWA (OEL TWA) [2]	1000 ppm
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

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

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8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Aerosol.
Colour	: Colourless.
Odour	: Pleasant.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: < 100 °C
Flash point	: -20 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Extremely flammable aerosol.
Vapour pressure	: No data available
Relative vapour density at 20°C	: No data available
Relative density	: No data available
Solubility	: soluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Pressurised container: May burst if heated.
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Extremely flammable aerosol. Pressurised container: May burst if heated.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

BUTANE (106-97-8)

LC50 Inhalation - Rat [ppm]	> 800000 ppm Source: ECHA
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PROPANE (74-98-6)

LC50 Inhalation - Rat [ppm]	800000 ppm Source: ECHA
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ISOBUTANE (75-28-5)

LC50 Inhalation - Rat	658 mg/l
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DIDECYLDIMETHYL AMMONIUM CHLORIDE (7173-51-5)

LD50 oral rat	658 mg/kg
LD50 dermal rat	> 2000 mg/kg

PROPAN-2-OL (67-63-0)

LD50 oral rat	5045 mg/kg
LD50 dermal rabbit	12800 mg/kg

2-(2-BUTOXYETHOXY)ETHANOL (112-34-5)

LD50 oral rat	4500 mg/kg
LD50 oral	6050 mg/kg
LD50 dermal rabbit	2764 mg/kg bodyweight Animal: rabbit, Animal sex: male, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), 95% CL: 2090 - 3645

3-IODO-2-PROPYNYL BUTYLCARBAMATE (55406-53-6)

LD50 oral rat	1100 mg/kg Source: National Library of Medicine/Hazardous Substances Data Bank
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: EPA OPP 81-2 (Acute Dermal Toxicity), Remarks on results: not determinable due to absence of adverse toxic effects

2-AMINOETHANOL (141-43-5)

LD50 oral rat	1089 mg/kg Source: OECD SIDS
LD50 oral	620 mg/kg
LD50 dermal rabbit	2504 mg/kg Source: OECD SIDS
LD50 dermal	1025 mg/kg
LC50 Inhalation - Rat (Vapours)	> 1487 mg/l Source: ECHA

ETHANOL (64-17-5)

LD50 oral rat	10470 mg/kg
LD50 dermal	17100 mg/kg

Skin corrosion/irritation : Not classified

DIDECYLDIMETHYL AMMONIUM CHLORIDE (7173-51-5)

pH	6.8 Source: ECHA
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2-AMINOETHANOL (141-43-5)

pH	12.1 Source: ECHA
Serious eye damage/irritation	: Causes serious eye irritation.

DIDECYLDIMETHYL AMMONIUM CHLORIDE (7173-51-5)

pH	6.8 Source: ECHA
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2-AMINOETHANOL (141-43-5)

pH	12.1 Source: ECHA
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

PROPAN-2-OL (67-63-0)

IARC group	3 - Not classifiable
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified

PROPAN-2-OL (67-63-0)

STOT-single exposure	May cause drowsiness or dizziness.
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2-AMINOETHANOL (141-43-5)

STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: Not classified

2-(2-BUTOXYETHOXY)ETHANOL (112-34-5)

NOAEL (oral, rat, 90 days)	250 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), Guideline: EPA OPPTS 870.3100 (90-Day Oral Toxicity in Rodents)
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3-IODO-2-PROPYNYL BUTYLCARBAMATE (55406-53-6)

LOAEL (dermal, rat/rabbit, 90 days)	500 mg/kg bodyweight Animal: rat, Guideline: EPA OPP 82-3 (Subchronic Dermal Toxicity 90 Days), Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)
LOAEC (inhalation, rat,dust/mist/fume, 90 days)	0.0067 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)
NOAEL (oral, rat, 90 days)	20 mg/kg bodyweight Animal: rat, Guideline: other:; Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
NOAEL (dermal, rat/rabbit, 90 days)	200 mg/kg bodyweight Animal: rat, Guideline: EPA OPP 82-3 (Subchronic Dermal Toxicity 90 Days), Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	0.00116 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

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Vaporizer	Aerosol
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2-(2-BUTOXYETHOXY)ETHANOL (112-34-5)

Viscosity, kinematic	≈ 6.794 mm ² /s
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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified

BUTANE (106-97-8)

LC50 - Fish [1]	27.98 mg/l Source: QSAR
EC50 96h - Algae [1]	16.47 mg/l Source: QSAR

PROPANE (74-98-6)

LC50 - Fish [1]	> 100 mg/l Source: IUCLID
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DIDECYLDIMETHYL AMMONIUM CHLORIDE (7173-51-5)

LC50 - Fish [1]	0.49 mg/l Source: ECHA
EC50 - Crustacea [1]	0.029 mg/l Source: ECHA
EC50 72h - Algae [1]	0.025 mg/l Source: ECHA

PROPAN-2-OL (67-63-0)

LC50 - Fish [1]	9640 mg/l
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2-(2-BUTOXYETHOXY)ETHANOL (112-34-5)

LC50 - Fish [1]	1300 mg/l Test organisms (species): Lepomis macrochirus
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna
EC50 96h - Algae [1]	> 100 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)

3-IODO-2-PROPYNYL BUTYLCARBAMATE (55406-53-6)

LC50 - Fish [1]	0.067 mg/l Source: The ECOTOXicology database
EC50 - Crustacea [1]	0.16 mg/l Source: The ECOTOXicology database
EC50 96h - Algae [1]	1.978 mg/l Source: Ecological Structure Activity Relationships

2-AMINOETHANOL (141-43-5)

LC50 - Fish [1]	170 mg/l Source: OECD SIDS
EC50 - Crustacea [1]	32.6 mg/l
EC50 - Other aquatic organisms [1]	32.6 mg/l
ErC50 algae	2.1 mg/l Source: ECHA

ETHANOL (64-17-5)

LC50 - Fish [1]	> 100 mg/l
EC50 - Other aquatic organisms [1]	> 100 mg/l
ErC50 algae	275 mg/l Source: ECHA

12.2. Persistence and degradability

Muc-Off One-Shot Anti-Viral Grenade	
Persistence and degradability	Biodegradable.

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12.3. Bioaccumulative potential

BUTANE (106-97-8)

Partition coefficient n-octanol/water (Log Pow)	2.89 Source: ICSC
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PROPANE (74-98-6)

Partition coefficient n-octanol/water (Log Pow)	2.36
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ISOBUTANE (75-28-5)

Partition coefficient n-octanol/water (Log Pow)	2.76
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DIDECYLDIMETHYL AMMONIUM CHLORIDE (7173-51-5)

Partition coefficient n-octanol/water (Log Pow)	2.58 Source: ECHA
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PROPAN-2-OL (67-63-0)

Partition coefficient n-octanol/water (Log Pow)	0.05 Source: ICSC
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2-(2-BUTOXYETHOXY)ETHANOL (112-34-5)

Partition coefficient n-octanol/water (Log Pow)	0.56
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3-IODO-2-PROPYNYL BUTYLCARBAMATE (55406-53-6)

Partition coefficient n-octanol/water (Log Pow)	2.4 Source: Corporate Solution From Thomson Micromedex
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2-AMINOETHANOL (141-43-5)

Partition coefficient n-octanol/water (Log Pow)	-1.31 Source: ICSC
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ETHANOL (64-17-5)

Partition coefficient n-octanol/water (Log Pow)	-0.32 Source: ICSC
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12.4. Mobility in soil

DIDECYLDIMETHYL AMMONIUM CHLORIDE (7173-51-5)

Mobility in soil	667 – 24433 Source: ECHA
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3-IODO-2-PROPYNYL BUTYLCARBAMATE (55406-53-6)

Mobility in soil	269.15
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12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with ADR / IMDG

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ADR	IMDG
14.1. UN number	
UN 1950	UN 1950
14.2. UN proper shipping name	
AEROSOLS	AEROSOLS
Transport document description	
UN 1950 AEROSOLS, 2.1, (D)	UN 1950 AEROSOLS, 2.1
14.3. Transport hazard class(es)	
2.1	2.1
	
14.4. Packing group	
Not applicable	Not applicable
14.5. Environmental hazards	
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No
No supplementary information available	

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: 5F
Special provisions (ADR)	: 190, 327, 344, 625
Limited quantities (ADR)	: 1I
Excepted quantities (ADR)	: E0
Packing instructions (ADR)	: P207, LP200
Special packing provisions (ADR)	: PP87, RR6, L2
Mixed packing provisions (ADR)	: MP9
Transport category (ADR)	: 2
Special provisions for carriage - Packages (ADR)	: V14
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV9, CV12
Special provisions for carriage - Operation (ADR)	: S2
Tunnel restriction code (ADR)	: D

Transport by sea

Special provisions (IMDG)	: 63, 190, 277, 327, 344, 381, 959
Packing instructions (IMDG)	: P207, LP200
Special packing provisions (IMDG)	: PP87, L2
EmS-No. (Fire)	: F-D
EmS-No. (Spillage)	: S-U
Stowage category (IMDG)	: None
Stowage and handling (IMDG)	: SW1, SW22
Segregation (IMDG)	: SG69

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

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SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals):

Didecyldimethylammonium chloride (7173-51-5)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

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

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer

Muc-Off One-Shot Anti-Viral Grenade

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Abbreviations and acronyms:	
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Full text of H- and EUH-statements:	
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Gas 1	Flammable gases, Category 1
Flam. Liq. 2	Flammable liquids, Category 2
H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H225	Highly flammable liquid and vapour.

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Full text of H- and EUH-statements:	
H229	Pressurised container: May burst if heated.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A
Skin Sens. 1	Skin sensitisation, Category 1
STOT RE 1	Specific target organ toxicity – Repeated exposure, Category 1
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.