



# Muc-Off Surface Prep Spray

## Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878  
Issue date: 01/04/2020 Revision date: 28/07/2023 Version: 3.0

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

#### 1.1. Product identifier

Product form : Mixture  
Product name : Muc-Off Surface Prep Spray  
Product code : 20970,WIP20823  
Type of product : Biocidal products (e.g. Disinfectants, pest control)  
Product group : End product

#### 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  
Use of the substance/mixture : Bactericide  
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]

Flammable liquids, Category 2 H225

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

Highly flammable liquid and vapour. Causes serious eye irritation.

#### 2.2. Label elements

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

Hazard pictograms (CLP) :



GHS02

GHS07

Signal word (CLP) :

Danger

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Hazard statements (CLP)	: H225 - Highly flammable liquid and vapour. H319 - Causes serious eye irritation.
Precautionary statements (CLP)	: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 - If eye irritation persists: Get medical advice/attention. P370+P378 - In case of fire: Use alcohol resistant foam, dry extinguishing powder, carbon dioxide (CO <sub>2</sub> ) to extinguish. P403+P235 - Store in a well-ventilated place. Keep cool. P501 - Dispose of contents to a hazardous or special waste collection point.

### 2.3. Other hazards

Contains no PBT/vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH Annex XIII

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

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	$\geq 70$	Flam. Liq. 2, H225 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 – 5	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
GLYCERINE substance with national workplace exposure limit(s) (GB)	CAS-No.: 56-81-5 EC-No.: 200-289-5 REACH-no: 01-2119471987-18	1 – 5	Not classified
HYDROGEN PEROXIDE substance with national workplace exposure limit(s) (GB)	CAS-No.: 7722-84-1 EC-No.: 231-765-0 EC Index-No.: 008-003-00-9	< 1	Ox. Liq. 1, H271 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Chronic 3, H412

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Specific concentration limits:		
Name	Product identifier	Specific concentration limits
HYDROGEN PEROXIDE	CAS-No.: 7722-84-1 EC-No.: 231-765-0 EC Index-No.: 008-003-00-9	( 5 ≤C ≤ 8) Eye Irrit. 2, H319 ( 8 ≤C ≤ 50) Eye Dam. 1, H318 ( 35 ≤C ≤ 50) Skin Irrit. 2, H315 ( 35 ≤C < 100) STOT SE 3, H335 ( 50 ≤C ≤ 70) Ox. Liq. 2, H272 ( 50 ≤C ≤ 70) Skin Corr. 1B, H314 ( 70 ≤C < 100) Ox. Liq. 1, H271 ( 70 ≤C < 100) Skin Corr. 1A, H314

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 : Rinse skin with water/shower. Take off immediately all contaminated clothing.
- 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 : Highly flammable liquid and vapour.
- Hazardous decomposition products in case of fire : Toxic fumes may be released.

### 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.

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### 6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
- 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. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Avoid contact with skin and eyes.
- 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

- Technical measures : Ground/bond container and receiving equipment.
- Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed.

### 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

GLYCERINE (56-81-5)	
United Kingdom - Occupational Exposure Limits	
Local name	Glycerol
WEL TWA (OEL TWA) [1]	10 mg/m <sup>3</sup> mist
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 <sup>3</sup>
WEL TWA (OEL TWA) [2]	1000 ppm
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 <sup>3</sup>
WEL TWA (OEL TWA) [2]	400 ppm

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PROPAN-2-OL (67-63-0)	
WEL STEL (OEL STEL)	1250 mg/m <sup>3</sup>
WEL STEL (OEL STEL) [ppm]	500 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
HYDROGEN PEROXIDE (7722-84-1)	
United Kingdom - Occupational Exposure Limits	
Local name	Hydrogen peroxide
WEL TWA (OEL TWA) [1]	1.4 mg/m <sup>3</sup>
WEL TWA (OEL TWA) [2]	1 ppm
WEL STEL (OEL STEL)	2.8 mg/m <sup>3</sup>
WEL STEL (OEL STEL) [ppm]	2 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
Colour	: Colourless.
Odour	: alcohol.
Odour threshold	: Not available
Melting point	: < 0 °C
Freezing point	: Not available
Boiling point	: > 35 °C
Flammability	: Highly flammable liquid and vapour.
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: < 23 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: 7
Viscosity, kinematic	: Not available
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: 0.86
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

### 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

Highly flammable liquid and vapour.

### 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

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### 10.6. Hazardous decomposition products

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

## 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

#### GLYCERINE (56-81-5)

LD50 oral rat	23000 mg/kg
LC50 Inhalation - Rat (Vapours)	> 2.75 mg/l Source: ECHA

#### ETHANOL (64-17-5)

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

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

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

#### HYDROGEN PEROXIDE (7722-84-1)

LD50 oral rat	693.7 mg/kg Source: ECHA
LD50 dermal rabbit	3000 mg/kg Source: ChemIDPlus
LC50 Inhalation - Rat	2000 mg/m <sup>3</sup> Source: ChemIDPlus

Skin corrosion/irritation : Not classified  
pH: 7

#### HYDROGEN PEROXIDE (7722-84-1)

pH	5.1 Source: HSDB
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Serious eye damage/irritation : Causes serious eye irritation.  
pH: 7

#### HYDROGEN PEROXIDE (7722-84-1)

pH	5.1 Source: HSDB
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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
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#### HYDROGEN PEROXIDE (7722-84-1)

IARC group	3 - Not classifiable
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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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#### HYDROGEN PEROXIDE (7722-84-1)

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

### 11.2. Information on other hazards

No additional information available

## 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

#### GLYCERINE (56-81-5)

LC50 - Fish [1]	54000 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
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#### 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

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

LC50 - Fish [1]	9640 mg/l
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#### HYDROGEN PEROXIDE (7722-84-1)

LC50 - Fish [1]	16.4 mg/l Source: ECHA
EC50 72h - Algae [1]	1.38 mg/l Source: ECHA

### 12.2. Persistence and degradability

#### Muc-Off Surface Prep Spray

Persistence and degradability	Biodegradable.
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### 12.3. Bioaccumulative potential

#### GLYCERINE (56-81-5)

Partition coefficient n-octanol/water (Log Pow)	-1.75 Source: ECHA
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#### ETHANOL (64-17-5)

Partition coefficient n-octanol/water (Log Pow)	-0.32 Source: ICSC
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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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#### HYDROGEN PEROXIDE (7722-84-1)

Partition coefficient n-octanol/water (Log Pow)	-1.36 Source: IPCS
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### 12.4. Mobility in soil

No additional information available

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### 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

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.  
Additional information : Flammable vapours may accumulate in the container.

## SECTION 14: Transport information

In accordance with ADR / IMDG

ADR	IMDG
<b>14.1. UN number or ID number</b>	
UN 1170	UN 1170
<b>14.2. UN proper shipping name</b>	
ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
<b>Transport document description</b>	
UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, II, (D/E)	UN 1170 ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION), 3, II
<b>14.3. Transport hazard class(es)</b>	
3	3
	
<b>14.4. Packing group</b>	
II	II
<b>14.5. Environmental hazards</b>	
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

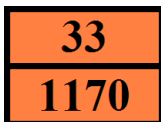
Classification code (ADR) : F1  
Special provisions (ADR) : 144, 601  
Limited quantities (ADR) : 1I  
Excepted quantities (ADR) : E2  
Packing instructions (ADR) : P001, IBC02, R001  
Mixed packing provisions (ADR) : MP19  
Portable tank and bulk container instructions (ADR) : T4

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Portable tank and bulk container special provisions (ADR) : TP1  
Tank code (ADR) : LGBF  
Vehicle for tank carriage : FL  
Transport category (ADR) : 2  
Special provisions for carriage - Operation (ADR) : S2, S20  
Hazard identification number (Kemler No.) : 33  
Orange plates :



Tunnel restriction code (ADR) : D/E  
EAC code : •2Y

### Transport by sea

Special provisions (IMDG) : 144  
Limited quantities (IMDG) : 1 L  
Excepted quantities (IMDG) : E2  
Packing instructions (IMDG) : P001  
IBC packing instructions (IMDG) : IBC02  
Tank instructions (IMDG) : T4  
Tank special provisions (IMDG) : TP1  
EmS-No. (Fire) : F-E  
EmS-No. (Spillage) : S-D  
Stowage category (IMDG) : A  
Properties and observations (IMDG) : Colourless, volatile liquids. Pure ETHANOL: flashpoint 13°C c.c. Explosive limits: 3.3% to 19% Miscible with water.

### 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

##### 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 no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

##### 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 substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

### ANNEX I RESTRICTED EXPLOSIVES PRECURSORS

List of substances which shall not be made available to, or introduced, possessed or used by, members of the general public, whether on their own or in mixtures or substances that include those substances, unless the concentration is equal to or lower than the limit values set out in column 2, and for which suspicious transactions and significant disappearances and thefts are to be reported to the relevant national contact point within 24 hours.

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Name	CAS-No.	Limit value	Upper limit value for licensing under Article 5(3)	Combined Nomenclature (CN) code for a separate chemically defined compound meeting the requirements of Note 1 to Chapter 28 or 29 of the CN, respectively	Combined Nomenclature code for mixture without constituents which would determine classification under another CN code
Hydrogen peroxide	7722-84-1	12 % w/w	35% w/w	2847 00 00	ex 3824 99 96

Please see [https://ec.europa.eu/home-affairs/system/files/2021-11/list\\_of\\_competent\\_authorities\\_and\\_national\\_contact\\_points\\_en.pdf](https://ec.europa.eu/home-affairs/system/files/2021-11/list_of_competent_authorities_and_national_contact_points_en.pdf)

### 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
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

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### Abbreviations and acronyms:

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. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
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. Liq. 2	Flammable liquids, Category 2
H225	Highly flammable liquid and vapour.
H271	May cause fire or explosion; strong oxidiser.
H272	May intensify fire; oxidiser.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H412	Harmful to aquatic life with long lasting effects.
Ox. Liq. 1	Oxidising Liquids, Category 1
Ox. Liq. 2	Oxidising Liquids, Category 2
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B

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Full text of H- and EUH-statements:	
Skin Irrit. 2	Skin corrosion/irritation, Category 2
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.



# Muc-Off Ceramic Coating

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830  
Revision date: 28/12/2022 Version: 1.0

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

#### 1.1. Product identifier

Product form Mixture  
Product name Muc-Off Ceramic Coating  
UFI S722-F0YQ-F00P-6U0A  
Product code 20966

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

##### 1.2.1. Relevant identified uses

Intended for general public  
Main use category : Consumer use  
Use of the substance/mixture : Care Products.  
coatings

##### 1.2.2. Uses advised against

Restrictions on use : Use only for intended applications.

#### 1.3. Details of the supplier of the safety data sheet

##### Supplier

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

Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH	0344 892 0111	Only for healthcare professionals
United Kingdom	National Poisons Information Service (Cardiff Centre) University Hospital Llandough	Penlan Road CF64 2XX	0344 892 0111	Only for healthcare professionals
United Kingdom	National Poisons Information Service (Edinburgh Centre) Royal Infirmary of Edinburgh	Little France Crescent EH16 4SA	0344 892 0111	Only for healthcare professionals
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER	+44 20 7188 7188	
United Kingdom	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre	16/17 Framlington Place Newcastle-upon-Tyne NE2 4AB	0344 892 0111	Only for healthcare professionals
United Kingdom	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA	0344 892 0111	Only for healthcare professionals

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

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 1	H318
Aspiration hazard, Category 1	H304
Hazardous to the aquatic environment – Chronic Hazard, Category 3	H412

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

##### Adverse physicochemical, human health and environmental effects

None under normal use.

#### 2.2. Label elements

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

Hazard pictograms (CLP)



GHS05

GHS08

Signal word (CLP)

: Danger

Contains

: 2,2,4,4,6,6-hexamethylcyclotrisilazane; Bis(trimethoxysilylpropyl)amine; Alkanes, C12-14-iso-

Hazard statements (CLP)

: H304 - May be fatal if swallowed and enters airways.  
H315 - Causes skin irritation.  
H318 - Causes serious eye damage.  
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements (CLP)

: P102 - Keep out of reach of children.  
P264 - Wash hands, forearms and face thoroughly after handling.  
P273 - Avoid release to the environment.  
P280 - Wear protective gloves, eye protection, protective clothing.  
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.  
P331 - Do NOT induce vomiting.  
P332+P313 - If skin irritation occurs: Get medical advice/attention.  
P362+P364 - Take off contaminated clothing and wash it before reuse.  
P405 - Store locked up.  
P501 - Dispose of contents/ container in accordance with national regulations.

Child-resistant fastening

: Applicable

Tactile warning

: Applicable

#### 2.3. Other hazards

Other hazards which do not result in classification : None under normal conditions.

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Contains no PBT/vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH Annex XIII

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Not applicable

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### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Alkanes, C12-14-iso-	CAS-No.: 68551-19-9 EC-No.: 271-369-5 REACH-no: 01-2119491311-45	> 60	Asp. Tox. 1, H304
Bis(trimethoxysilylpropyl)amine	CAS-No.: 82985-35-1 EC-No.: 403-480-3 EC Index-No.: 014-012-00-9 REACH-no: 1-0000015314-78	< 10	Eye Dam. 1, H318 Aquatic Chronic 2, H411
2,2,4,4,6,6-hexamethylcyclotrisilazane	CAS-No.: 1009-93-4 EC-No.: 213-773-6 REACH-no: 01-2120359059-49	< 5	Acute Tox. 4 (Oral), H302 (ATE=1700 mg/kg bodyweight) Skin Corr. 1C, H314 STOT SE 3, H335

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. Get medical advice/attention if you feel unwell.
First-aid measures after skin contact	: Take off contaminated clothing and wash it before reuse. Gently wash with plenty of soap and water. If symptoms persist call a doctor.
First-aid measures after eye contact	: Remove contact lenses, if present and easy to do. Continue rinsing. In case of contact, immediately rinse eyes with plenty of water for at least 15 minutes. Get immediate medical advice/attention.
First-aid measures after ingestion	: If swallowed: rinse mouth. Do NOT induce vomiting. Risk of aspiration pneumonia. Get immediate medical advice/attention.

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

Symptoms/effects after inhalation	: Aspiration hazard.
Symptoms/effects after skin contact	: Causes skin irritation.
Symptoms/effects after eye contact	: Causes serious eye damage.
Symptoms/effects after ingestion	: Aspiration of the product into the lungs may cause very serious pneumonia.

### 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	: Dry chemical, CO <sub>2</sub> , dry sand, or alcohol-resistant foam.
Unsuitable extinguishing media	: Do not use extinguishing media containing water. Do not use a water jet since it may cause the fire to spread.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard	: Solvent vapours may form explosive mixture with air.
Explosion hazard	: Vapours are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapours. Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level.

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Hazardous decomposition products in case of fire : Combustion products may include the following: carbon oxides (CO, CO<sub>2</sub>) (carbon monoxide, carbon dioxide) nitrogen oxides (NO, NO<sub>2</sub> etc.). Silicon oxide. release of harmful/irritant gases/vapours.

### 5.3. Advice for firefighters

Precautionary measures fire : Ventilate the area thoroughly.  
Firefighting instructions : Move containers from fire area if it can be done without personal risk. Use water spray or fog for cooling exposed containers. Do not allow run-off from fire-fighting to enter drains or water courses.  
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Ventilate the area thoroughly. Avoid contact with skin and eyes. Do not breathe vapours.

#### 6.1.1. For non-emergency personnel

Protective equipment : For further information refer to section 8: "Exposure controls/personal protection".  
Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

Protective equipment : For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Avoid release to the environment. Do not allow to enter drains or water courses.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Contain or absorb spilled liquid with earth or other absorbent material. After cleaning, flush traces away with water.  
Other information : This material and its container must be disposed of as hazardous waste.

### 6.4. Reference to other sections

SECTION 8. SECTION 11. SECTION 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Keep out of reach of children. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes. Avoid high temperatures. Do not breathe vapours.  
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Use barrier cream. Take off immediately all contaminated clothing and wash it before reuse.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep locked up and out of reach of children. Store in a well-ventilated place. Keep container tightly closed. Keep cool. Protect from sunlight.  
Incompatible products : Keep away from food, drink and animal feedingstuffs.

### 7.3. Specific end use(s)

Automotive Care Products. Automotive coatings.

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### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### 8.1.1 National occupational exposure and biological limit values

No additional information available

##### 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

<b>Bis(trimethoxysilylpropyl)amine (82985-35-1)</b>	
<b>PNEC (Water)</b>	
PNEC aqua (freshwater)	0.036 mg/l
PNEC aqua (marine water)	0.0036 mg/l
PNEC aqua (intermittent, freshwater)	0.36 mg/l
PNEC aqua (intermittent, marine water)	0.036 mg/l
<b>PNEC (Sediment)</b>	
PNEC sediment (freshwater)	0.1396 mg/kg dwt
PNEC sediment (marine water)	0.014 mg/kg dwt
<b>PNEC (Soil)</b>	
PNEC soil	0.0068 mg/kg dwt
<b>PNEC (STP)</b>	
PNEC sewage treatment plant	27 mg/l

##### 8.1.5. Control banding

No additional information available

#### 8.2. Exposure controls

##### 8.2.1. Appropriate engineering controls

###### Appropriate engineering controls:

Good standard of general ventilation. In case of inadequate ventilation wear respiratory protection.

##### 8.2.2. Personal protection equipment

###### Personal protective equipment:

Safety glasses. Face shield. Wear protective gloves.

###### Personal protective equipment symbol(s):



##### 8.2.2.1. Eye and face protection

###### Eye protection:

EN 166

##### 8.2.2.2. Skin protection

###### Hand protection:

EN 374

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### 8.2.2.3. Respiratory protection

#### Respiratory protection:

In case of inadequate ventilation wear respiratory protection.

### 8.2.2.4. Thermal hazards

No additional information available

### 8.2.3. Environmental exposure controls

No additional information available

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear.
Colour	: Colourless.
Odour	: faint specific odour. Hydrocarbon-like.
Odour threshold	: No data available
pH	: 11
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: 187.7 °C @ 1013 hPa
Flash point	: 79.4 °C
Auto-ignition temperature	: 270 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: 35 Pa @ 25°C
Relative vapour density at 20°C	: No data available
Relative density	: No data available
Density	: 0.78 g/ml
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: < 20.5 mm <sup>2</sup> /s @ 40°C
Viscosity, dynamic	: No data available
Explosive properties	: No data available
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

None.

### 10.2. Chemical stability

Stable under normal conditions of use.

### 10.3. Possibility of hazardous reactions

None under normal use.

### 10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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### 10.5. Incompatible materials

Strong oxidizing agents.

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Combustion products may include the following: carbon oxides (CO, CO<sub>2</sub>) (carbon monoxide, carbon dioxide) nitrogen oxides (NO, NO<sub>2</sub> etc.). Silicon oxides. release of harmful/irritant gases/vapours.

## 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

#### 2,2,4,4,6,6-hexamethylcyclotrisilazane (1009-93-4)

LD50 oral	1700 mg/kg bodyweight Animal: mouse, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LC50 Inhalation - Rat	≥ 4.9 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), Remarks on results: not determinable due to absence of adverse toxic effects

Skin corrosion/irritation : Causes skin irritation.  
pH: 11

Serious eye damage/irritation : Causes serious eye damage.  
pH: 11

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

#### 2,2,4,4,6,6-hexamethylcyclotrisilazane (1009-93-4)

STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: Not classified
Aspiration hazard	: May be fatal if swallowed and enters airways.

### Muc-Off Ceramic Coating

Viscosity, kinematic	< 20.5 mm <sup>2</sup> /s @ 40°C
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### Bis(trimethoxysilylpropyl)amine (82985-35-1)

Viscosity, kinematic	5.7 mm <sup>2</sup> /s Temp.: '20°C' Parameter: 'kinematic viscosity (in mm <sup>2</sup> /s)'
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## SECTION 12: Ecological information

### 12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Harmful to aquatic life with long lasting effects.

#### 2,2,4,4,6,6-hexamethylcyclotrisilazane (1009-93-4)

EC50 - Crustacea [1]	> 117 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 118 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

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<b>Bis(trimethoxysilylpropyl)amine (82985-35-1)</b>	
LC50 - Fish [1]	57 mg/l Test organisms (species): Oryzias latipes
LC50 - Fish [2]	> 100 mg/l Test organisms (species): Oryzias latipes
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	31 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	36 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

### 12.2. Persistence and degradability

<b>Muc-Off Ceramic Coating</b>	
Persistence and degradability	Contains non readily biodegradable component(s).

### 12.3. Bioaccumulative potential

<b>Muc-Off Ceramic Coating</b>	
Bioaccumulative potential	Contains bioaccumulative component(s).

### 12.4. Mobility in soil

<b>Muc-Off Ceramic Coating</b>	
Ecology - soil	Immiscible with water.

### 12.5. Results of PBT and vPvB assessment

<b>Muc-Off Ceramic Coating</b>	
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	
<b>Component</b>	
2,2,4,4,6,6-hexamethylcyclotrisilazane (1009-93-4)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Bis(trimethoxysilylpropyl)amine (82985-35-1)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods : Solvent reclamation/regeneration.  
Product/Packaging disposal recommendations : This material and its container must be disposed of as hazardous waste.

## SECTION 14: Transport information

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

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ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.2. UN proper shipping name</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.3. Transport hazard class(es)</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.4. Packing group</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
<b>14.5. Environmental hazards</b>				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

### 14.6. Special precautions for user

#### Overland transport

Not regulated

#### Transport by sea

Not regulated

#### Air transport

Not regulated

#### Inland waterway transport

Not regulated

#### Rail transport

Not regulated

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

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

##### 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 no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

##### POP Regulation (Persistent Organic Pollutants)

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

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### 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
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
EC-No.	European Community number
IATA	International Air Transport Association
	IBC Code = International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IMO)
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
NOAEL	No-Observed Adverse Effect Level
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
vPvB	Very Persistent and Very Bioaccumulative

Data sources : ECHA (European Chemicals Agency). Supplier's safety documents.

### Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1

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### Full text of H- and EUH-statements:

H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
Skin Corr. 1C	Skin corrosion/irritation, Category 1, Sub-Category 1C
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

### Safety Data Sheet (SDS), EU

The information contained in this Safety Data Sheet (SDS) is, to the best of our knowledge, true and accurate and presented in good faith. Cerakote UK makes no warranties, expressed or implied, as to the accuracy and adequacy of this information. Because many factors may affect processing or application/use of this product, this data is offered solely for the user's consideration, investigation and verification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or process. Regulatory requirements are subject to change and may differ from one location to another. It is the responsibility of the buyer/user to ensure its activities comply with all local, state and federal regulations.