

# Safety Data Sheet

In accordance with Regulation (EC) No. 1907/2006 (REACH)  
and Regulation (EU) No. 2015/830

## Mulcol® Multifoam 2K

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1 Product identifier

**Trade name** Mulcol® Multifoam 2K  
2 Components Fire Protection Foam

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

**General use** Di-/poly-isocyanate component to produce polyurethanes.  
For industrial purposes only.

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

**Company name** Mulcol International  
Arnesteinweg 18  
4338 PD Middelburg  
The Netherlands  
**Telephone** +31 (0)118-726140  
**E-mail** info@mulcol.com  
**Website** www.mulcol.com

#### 1.4 Emergency telephone number

In case of emergency contact toxicological information, emergency tel 112.  
For non-emergency poison information, see [http://www.who.int/gho/phe/chemical\\_safety/poisons\\_centres/en/](http://www.who.int/gho/phe/chemical_safety/poisons_centres/en/)

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

##### Classification according to EC regulation 1272/2008 (CLP):

Skin Irrit. 2; H315	Causes skin irritation.
Eye Irrit. 2; H319	Causes serious eye irritation.
Resp. Sens. 1; H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sens. 1; H317	May cause an allergic skin reaction.
Carc. 2; H351	Suspected of causing cancer.
STOT SE 3; H335	May cause respiratory irritation.
STOT RE 2; H373	May cause damage to organs through prolonged or repeated exposure.

#### 2.2 Label elements

##### Labelling (CLP)



**Signal word:** Danger

##### Hazard statements:

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.

**Precautionary statements:**

P201	Obtain special instructions before use.
P260	Do not breathe dusts or mists.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P285	In case of inadequate ventilation wear respiratory protection.
P302+P352	IF ON SKIN: Wash with plenty of water/soap.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P501	Dispose of contents/container to hazardous or special waste collection point.

**Special labelling:**

EUH204	Contains isocyanates. May produce an allergic reaction. Contains Diphenylmethane diisocyanate (isomers, homologues).
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**2.3 Other hazards**

Persons with over-sensitive breath ways (e.g. asthma, chronic bronchitis) are not allowed to use the product due to safety regulations. Vapours and aerosols are the main dangers to the respiratory tract. Respiratory symptoms may still occur several hours after overexposure.

**Results of PBT and vPvB assessment:**

No data available.

**SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS**

**3.1 Substances**

Not applicable.

**3.2 Mixtures**

**Hazardous ingredients:**

Ingredient	Designation	Content	Classification
EC No. - CAS 9016-87-9	Diphenylmethane diisocyanate (isomers, homologues)	10 - 30 %	Acute Tox. 4; H332. Skin Irrit. 2; H315. Eye Irrit. 2; H319. Resp. Sens. 1; H334. Skin Sens. 1; H317. Carc. 2; H351. STOT SE 3; H335. STOT RE 2; H373.
EC No. 907-495-0 CAS -	Reaction product of decanoic acid, 12-hydroxystearic acid and 1,2-ethanediamine	< 10 %	Aquatic Chronic 3; H412.

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

**SECTION 4: FIRST AID MEASURES**

**4.1 Description of first aid measures**

<b>General information:</b>	Immediately remove any wetted clothing, shoes or stockings.
<b>In case of inhalation:</b>	Move victim to fresh air; if necessary, provide artificial respiration or oxygen. Do not allow victim to become chilled. Keep victim warm. Keep victim calm and seek medical attention immediately. If victim is at risk of losing consciousness, position and transport on their side.
<b>In case of skin contact:</b>	Immediately clean with water and soap and, if available, apply a generous amount of polyethylene glycol 400. In case of skin reactions, consult a physician.
<b>After eye contact:</b>	Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Afterwards, consult an ophthalmologist immediately.
<b>After swallowing:</b>	Rinse mouth. Do not induce vomiting. Immediately get medical attention.

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

<b>In case of inhalation:</b>	Irritation of nose, throat, lung. Headache, throat dryness, respiratory complaints, chest pressure. May cause sensitization by inhalation. Susceptible persons may develop ailments and allergic reactions with some delay.
<b>In case of ingestion:</b>	May be harmful if swallowed.
<b>After contact with skin:</b>	In case of a prolonged contact tanning and irritating effects may occur.
<b>After eye contact:</b>	Produces for a short time a weak reddening and tumefaction of the conjunctiva as well as a weak, reversible rendering turbid of the cornea.

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

Product causes irritation of respiratory tracts and may possibly increase sensitivity of skin and respiratory tracts. Treatment of the acute irritation or bronchial narrowing is mainly symptomatic. Depending on the scale of exposition, as well as aches and pains resulting, long-term medical care may be required.

### SECTION 5: FIREFIGHTING MEASURES

#### 5.1 Extinguishing media

**Suitable extinguishing media:** Foam, extinguishing powder, carbon dioxide.  
In case of greater fires: also water fog.

**Extinguishing media which must not be used for safety reason:** Strong water jet.

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

In case of fire may be liberated: Isocyanate vapours, traces of hydrogen cyanide, nitrous fumes, carbon monoxide.

#### 5.3 Advice for firefighters

##### **Special protective equipment for firefighters:**

Wear self-contained breathing apparatus and protective clothing to protect skin and eyes.

##### **Additional information:**

Hazchem-Code: -

Heating causes rise in pressure with risk of bursting.

Cool endangered containers with water spray and, if possible, remove from danger zone.

Remove persons not involved upwind.

Do not allow water used to extinguish fire to enter drains, ground or waterways. Treat runoff as hazardous.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

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

Avoid exposure. Keep away from unprotected people. Wear suitable protective clothing.

Provide adequate ventilation. Avoid contact with the substance.

Use a breathing protection against vapours/aerosol.

#### 6.2 Environmental precautions

Do not allow to penetrate into soil, waterbodies or drains.

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

Take up mechanically, placing in appropriate containers for disposal. Final cleaning.

#### 6.4 Reference to other sections

Refer additionally to chapter 8 and 13.

### SECTION 7: HANDLING AND STORAGE

#### 7.1 Precautions for safe handling

##### **Advices on safe handling:**

Avoid exposure - obtain special instructions before use.

Provide adequate ventilation, and local exhaust as needed.

Airflow should move away from persons.

The effectiveness of the facilities must be checked at regular intervals.

Avoid contact with skin and eyes. Wear protective equipment.

Do not breathe dusts or mists.

## 7.2 Conditions for safe storage, including any incompatibilities

### Requirements for storerooms and containers:

Keep containers tightly closed and at a temperature between 10 °C and 35 °C. Keep in a cool, well-ventilated place.

Keep container dry. Protect from humidity and water.

Do not allow the product to enter the ground.

### Hints on joint storage:

Keep away from food and drink.

### Further details:

Use caution when opening containers under pressure.

## 7.3 Specific end use(s)

Observe instructions for use.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
9016-87-9	Diphenylmethane diisocyanate (isomers, homologues)	Great Britain: WEL-STEL	0.07 mg/m <sup>3</sup> (as -NCO)
		Great Britain: WEL-TWA	0.02 mg/m <sup>3</sup> (as -NCO)

#### Additional information:

Product, cured: For mechanical processing: Comply with occupational limit values for dust.

### 8.2 Exposure controls

Provide good ventilation and/or an exhaust system in the work area.

#### Personal protection equipment

##### Occupational exposure controls

##### Respiratory protection:

Respiratory protection must be worn whenever the WEL levels have been exceeded.

Use combination filter type A2-P2 according to EN 14387.

##### Hand protection:

protective gloves according to EN 374

Glove material: Nitrile rubber - NBR >= 0,35 mm

Butyl caoutchouc (butyl rubber) - IIR >= 0,5 mm,

Fluororubber (Viton) - FKM (>= 0,4 mm)

Polyvinyl chloride - PVC (>= 0,5 mm).

Breakthrough time: >480 min.

Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

##### Eye protection:

Tightly sealed goggles according to EN 166.

##### Body protection:

Wear suitable protective clothing.

##### General protection and hygiene measures:

Avoid exposure - obtain special instructions before use.

Avoid contact with the substance. Do not breathe dusts or mists.

Work place should be equipped with a shower and an eye rinsing apparatus.

Wash hands before breaks and after work.

Take off immediately all contaminated clothing.

Keep away from food, drink and animal feeding stuffs.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Appearance	Form : liquid
	Colour : red brown
Odour	characteristic
Odour threshold	no data available
pH value	not applicable
Melting point/freezing point	not determined
Initial boiling point and boiling range	not determined

Flash point/flash point range	not applicable
Evaporation rate	no data available
Flammability	not determined
Explosive properties	no data available
Explosion limits	LEL (Lower Explosion Limit): not applicable UEL (Upper Explosive Limit): not applicable
Vapour pressure	at 25 °C: <= 0.00001 kPa
Vapour density	no data available
Density	approx. 1.3 g/mL
Water solubility	practically insoluble
Partition coefficient: n-octanol/water	not determined
Auto-ignition temperature	not applicable
Thermal decomposition	no data available
Viscosity, dynamic	not relevant
Explosive properties	no data available
Oxidizing characteristics	no

## 9.2 Other information

### Bulk density:

not applicable.

## SECTION 10: STABILITY AND REACTIVITY

### 10.1 Reactivity

Reactions with alcohols, amines, liquid acids and bases.

Contact with Water liberates carbon dioxide.

### 10.2 Chemical stability

Product is stable under normal storage conditions.

### 10.3 Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

### 10.4 Conditions to avoid

No data available.

### 10.5 Incompatible materials

Amines, alcohols, water.

### 10.6 Hazardous decomposition products

In case of fire: Isocyanate vapours, traces of hydrogen cyanide, nitrous fumes, carbon monoxide

### Thermal decomposition:

No data available

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Toxicological effects

Acute toxicity (oral): Based on available data, the classification criteria are not met.

Acute toxicity (dermal): Based on available data, the classification criteria are not met.

Acute toxicity (inhalative): Based on available data, the classification criteria are not met.

Skin corrosion/irritation: Skin Irrit. 2; H315 = Causes skin irritation.

Eye damage/irritation: Eye Irrit. 2; H319 = Causes serious eye irritation.

Sensitisation to the respiratory tract: Resp. Sens. 1; H334 = May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Skin sensitisation: Skin Sens. 1; H317 = May cause an allergic skin reaction.

Germ cell mutagenicity/Genotoxicity: Lack of data.

Carcinogenicity: Carc. 2; H351 = Suspected of causing cancer.

Reproductive toxicity: Lack of data.

Effects on or via lactation: Lack of data.

Specific target organ toxicity (single exposure): STOT SE 3; H335 = May cause respiratory irritation.

Specific target organ toxicity (repeated exposure): STOT RE 2; H373 = May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard: Lack of data.

**Other information:**

Persons with over-sensitive breath ways (e.g. asthma, chronic bronchitis) are not allowed to use the product due to safety regulations. Information about Diphenylmethane diisocyanate (isomers, homologues): A long-term study with rats over two years with mechanically produced, inhalable aerosols (aerodyn. diameter of 95% under 5 µm) of polymer MDI (PMDI) and concentrations of 0.2, 1.0 and 6.0 mg PMDI/m<sup>3</sup> showed the following results: The group of animals exposed to the highest concentration suffered an increased incidence of lung tumours, persistent inflammatory changes to the nose, respiratory tract and lungs, and yellowish deposits in the respiratory tract and lungs. The animals in the 1.0mg/m<sup>3</sup> group exhibited slight irritation and inflammatory changes to the nose, respiratory tract and lungs, but did not develop lung tumours and/or deposits. Animals in the 0.2 mg/m<sup>3</sup> group suffered no irritation: this concentration was therefore deemed to constitute the 'no-effect level'.

**Symptoms:**

In case of inhalation: Irritation of nose, throat, lung.

Headache, throat dryness, respiratory complaints, chest pressure.

May cause sensitization by inhalation. Susceptible persons may develop ailments and allergic reactions with some delay.

In case of ingestion: May be harmful if swallowed.

After contact with skin: In case of a prolonged contact tanning and irritating effects may occur.

After eye contact: Produces for a short time a weak reddening and tumefaction of the conjunctiva as well as a weak, reversible rendering turbid of the cornea.

**SECTION 12: ECOLOGICAL INFORMATION****12.1 Toxicity****Aquatic toxicity:**

Information about Diphenylmethane diisocyanate (isomers, homologues):

Bacterial toxicity: EC50 > 100 mg/L /3h

Daphnia toxicity: EC50 Daphnia magna: > 1000 mg/L /24h

Fish toxicity: LC 0 Brachydanio rerio (zebra-fish): > 1000 mg/L /96 h.

**12.2. Persistence and degradability****Further details:**

Forms carbon dioxide and turns into a hard and insoluble by-product (poly urea) on the water's edge. This reaction is intensified by surface-active substances (e.g. liquid soaps) or water soluble solvents. Based upon current knowledge, poly urea is inert and will not decompose.

**12.3 Bioaccumulative potential****Partition coefficient: n-octanol/water:**

Not determined.

**12.4 Mobility in soil**

No data available.

**12.5 Results of PBT and vPvB assessment**

No data available.

**12.6 Other adverse effects****General information:**

Do not allow to penetrate into soil, waterbodies or drains.

**SECTION 13: DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods****Product****Recommendation:**

Non-reacted state:

ASN 080501\*: Waste isocyanates

\*= Evidence for disposal must be provided.

Reacted state:

ASN 080410: waste adhesives and sealants other than those mentioned in 08 04 09.  
Dispose of waste according to applicable legislation.

#### **Contaminated packaging**

##### **Waste key number:**

15 01 02 = Plastic packaging

##### **Recommendation:**

Dispose of waste according to applicable legislation.  
Handle contaminated packages in the same way as the substance itself.  
Non-contaminated packages may be recycled.

### **SECTION 14: TRANSPORT INFORMATION**

#### **14.1 UN number**

##### **ADR/RID, IMDG, IATA-DGR:**

Not applicable.

#### **14.2 UN proper shipping name**

##### **ADR/RID, IMDG, IATA-DGR:**

Not restricted.

#### **14.3 Transport hazard class(es)**

##### **ADR/RID, IMDG, IATA-DGR:**

Not applicable.

#### **14.4 Packing group**

##### **ADR/RID, IMDG, IATA-DGR:**

Not applicable.

#### **14.5 Environmental hazards**

##### **Marine pollutant:**

No

#### **14.6 Special precautions for user**

No dangerous good in sense of these transport regulations.

#### **14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

No data available.

### **SECTION 15: REGULATORY INFORMATION**

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

##### **National regulations - Great Britain:**

##### **Hazchem-Code: -**

No data available

##### **National regulations - EC member states**

##### **Labelling of packaging with <= 125mL content**



Signal word:

**Danger**

<b>Hazard statements:</b>	H317 May cause an allergic skin reaction. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H335 May cause respiratory irritation. H351 Suspected of causing cancer. H373 May cause damage to organs through prolonged or repeated exposure.
<b>Safety precautions:</b>	P201 Obtain special instructions before use. P260 Do not breathe dusts or mists. P280 Wear protective gloves/protective clothing/eye protection/face protection. P285 In case of inadequate ventilation wear respiratory protection. P302+P352 IF ON SKIN: Wash with plenty of water/soap. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P308+P313 IF EXPOSED OR CONCERNED: Get medical advice/attention. P501 Dispose of contents/container to hazardous or special waste collection point.

### 15.2 Chemical Safety Assessment

For this mixture a chemical safety assessment is not required.

### SECTION 16: OTHER INFORMATION

#### Further information

#### Wording of the H-phrases under paragraph 2 and 3:

H315	= Causes skin irritation.
H317	= May cause an allergic skin reaction.
H319	= Causes serious eye irritation.
H332	= Harmful if inhaled.
H334	= May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	= May cause respiratory irritation.
H351	= Suspected of causing cancer.
H373	= May cause damage to organs through prolonged or repeated exposure.
H412	= Harmful to aquatic life with long lasting effects.
EUH204	= Contains isocyanates. May produce an allergic reaction.

<b>Date of first version</b>	: 01-2017
<b>Earlier versions</b>	: not applicable

#### Department issuing data sheet

Contact person: see section 1: Dept. responsible for information

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

#### Notice to reader

The information contained in this safety data sheet is based on the present state of knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only.

It should not be construed as any guarantee of the technical performance or suitability for particular applications.

Mulcol International reserves the right to change or improve the series of properties of all products at any time and without prior notification. The technical data on this sheet was obtained under specific conditions. The user of this data remains responsible for the correct application thereof. In the event of doubt, we recommend asking if this data complies with the relevant requirements of application.