

## Safety Data Sheet

According to Annex II to REACH - Regulation 2015/830

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

#### 1.1. Product identifier

Code: DRAP129  
Product name: ARMOFIX MTX COMP. B

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

Intended use: Two-component epoxy resin - comp B

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

Name: DRACO ITALIANA S.p.A.  
Full address: Via Monte Grappa, 11 D-E  
District and Country: 20067 Tribiano (MI)  
Italy  
Tel.: +39 02.90632917  
Fax: +39 02.90631976  
e-mail address of the competent person responsible for the Safety Data Sheet: info@draco-edilizia.it

#### 1.4. Emergency telephone number

For urgent inquiries refer to:  
Centro Antiveleni di Bergamo 800883300 (Azienda Ospedaliera Papa Giovanni XXII)  
Centro Antiveleni di Firenze 0557947819 (Az. Osp. "Careggi" U.O. Tossicologia Medica)  
Centro Antiveleni di Foggia 80018345 (Az. Osp. Univ. Foggia)  
Centro Antiveleni di Milano 0266101029 (Osp. Niguarda Ca' Granda)  
Centro Antiveleni di Napoli 0817472870 (Az. Osp. "A. Cardarelli")  
Centro Antiveleni di Pavia 038224444 (CAV Centro Nazionale di Informazione Tossicologica)  
Centro Antiveleni di Roma 063054343 (CAV Policlinico "A. Gemelli")  
Centro Antiveleni di Roma 0649978000 (CAV Policlinico "Umberto I")  
Centro Antiveleni di Roma 06 68593726 (CAV "Osp. Pediatrico Bambino Gesù" Dip. Emergenza e Accettazione DEA)

### SECTION 2. Hazards identification

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

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2015/830. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

##### Hazard classification and indication:

|                                                                    |      |                                                    |
|--------------------------------------------------------------------|------|----------------------------------------------------|
| Skin corrosion, category 1C                                        | H314 | Causes severe skin burns and eye damage.           |
| Serious eye damage, category 1                                     | H318 | Causes serious eye damage.                         |
| Skin sensitization, category 1                                     | H317 | May cause an allergic skin reaction.               |
| Hazardous to the aquatic environment, chronic toxicity, category 3 | H412 | Harmful to aquatic life with long lasting effects. |

#### 2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:



## DRAP129 - ARMOFIX MTX COMP. B

## SECTION 2. Hazards identification ... / &gt;&gt;

Signal words: Danger

Hazard statements:

**H314** Causes severe skin burns and eye damage.  
**H317** May cause an allergic skin reaction.  
**H412** Harmful to aquatic life with long lasting effects.

Precautionary statements:

**P260** Do not breathe dust / fume / gas / mist / vapours / spray.  
**P305+P351+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
**P303+P361+P353** IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
**P280** Wear protective gloves/ protective clothing / eye protection / face protection.  
**P310** Immediately call a POISON CENTER / doctor / . . .  
**P264** Wash . . . thoroughly after handling.

**Contains:** Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia  
 Formaldehyde, polymer with benzenamine, hydrogenated  
 2-piperazin-1-iletilamina  
 4,4 Methylenebis (cyclohexylamine)

## 2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.

## SECTION 3. Composition/information on ingredients

## 3.2. Mixtures

Contains:

| Identification                                                                             | x = Conc. %           | Classification 1272/2008 (CLP) |
|--------------------------------------------------------------------------------------------|-----------------------|--------------------------------|
| <b>Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia</b> |                       |                                |
| CAS                                                                                        | 9046-10-0             | $50 \leq x < 100$              |
| EC                                                                                         | 618-561-0             |                                |
| INDEX                                                                                      |                       |                                |
| Reg. no.                                                                                   | 01-2119557899-12-XXXX |                                |
| <b>Alcol benzilico</b>                                                                     |                       |                                |
| CAS                                                                                        | 100-51-6              | $5 \leq x < 9$                 |
| EC                                                                                         | 202-859-9             |                                |
| INDEX                                                                                      |                       |                                |
| Reg. no.                                                                                   | 01-2119492630-38-XXXX |                                |
| <b>Formaldehyde, polymer with benzenamine, hydrogenated</b>                                |                       |                                |
| CAS                                                                                        | 135108-88-2           | $5 \leq x < 9$                 |
| EC                                                                                         | 603-894-6             |                                |
| INDEX                                                                                      |                       |                                |
| Reg. no.                                                                                   | 01-2119983522-33-XXXX |                                |
| <b>2-piperazin-1-iletilamina</b>                                                           |                       |                                |
| CAS                                                                                        | 140-31-8              | $1 \leq x < 3$                 |
| EC                                                                                         | 205-411-0             |                                |
| INDEX                                                                                      | 612-105-00-4          |                                |
| Reg. no.                                                                                   | 01-2119471486-30-XXXX |                                |
| <b>4,4 Methylenebis (cyclohexylamine)</b>                                                  |                       |                                |
| CAS                                                                                        | 1761-71-3             | $0,5 \leq x < 1$               |
| EC                                                                                         | 217-168-8             |                                |
| INDEX                                                                                      |                       |                                |
| Reg. no.                                                                                   | 01-2119541673-38-XXXX |                                |

**Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia**  
 CAS 9046-10-0  $50 \leq x < 100$  Skin Corr. 1C H314, Eye Dam. 1 H318, Aquatic Chronic 3 H412  
 EC 618-561-0

INDEX

Reg. no. 01-2119557899-12-XXXX

**Alcol benzilico**CAS 100-51-6  $5 \leq x < 9$ 

EC 202-859-9

INDEX

Reg. no. 01-2119492630-38-XXXX

**Formaldehyde, polymer with benzenamine, hydrogenated**CAS 135108-88-2  $5 \leq x < 9$ 

EC 603-894-6

INDEX

Reg. no. 01-2119983522-33-XXXX

**2-piperazin-1-iletilamina**CAS 140-31-8  $1 \leq x < 3$ 

EC 205-411-0

INDEX

Reg. no. 01-2119471486-30-XXXX

Reg. no. 01-2119471486-30-XXXX

**4,4 Methylenebis (cyclohexylamine)**CAS 1761-71-3  $0,5 \leq x < 1$ 

EC 217-168-8

INDEX

Reg. no. 01-2119541673-38-XXXX

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Reg. no. 01-2119541673-38-XXXX

Reg. no. 01-2119541673-38-XXXX

Classification 1272/2008 (CLP)

**Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia**  
 Skin Corr. 1C H314, Eye Dam. 1 H318, Aquatic Chronic 3 H412

INDEX

Reg. no. 01-2119557899-12-XXXX

**Alcol benzilico**CAS 100-51-6  $5 \leq x < 9$ 

EC 202-859-9

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Reg. no. 01-2119492630-38-XXXX

**Formaldehyde, polymer with benzenamine, hydrogenated**CAS 135108-88-2  $5 \leq x < 9$ 

EC 603-894-6

INDEX

Reg. no. 01-2119983522-33-XXXX

**2-piperazin-1-iletilamina**CAS 140-31-8  $1 \leq x < 3$ 

EC 205-411-0

INDEX

Reg. no. 01-2119471486-30-XXXX

Reg. no. 01-2119471486-30-XXXX

**4,4 Methylenebis (cyclohexylamine)**CAS 1761-71-3  $0,5 \leq x < 1$ 

EC 217-168-8

INDEX

Reg. no. 01-2119541673-38-XXXX

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Reg. no. 01-2119541673-38-XXXX

**Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia**  
 Skin Corr. 1C H314, Eye Dam. 1 H318, Aquatic Chronic 3 H412

**Alcol benzilico**  
 Acute Tox. 4 H302, Acute Tox. 4 H332, Eye Irrit. 2 H319

**Formaldehyde, polymer with benzenamine, hydrogenated**  
 Acute Tox. 4 H302, STOT RE 2 H373, Skin Corr. 1C H314, Eye Dam. 1 H318,  
 Skin Sens. 1 H317, Aquatic Chronic 3 H412

**2-piperazin-1-iletilamina**  
 Acute Tox. 3 H311, Acute Tox. 4 H302, Skin Corr. 1B H314, Eye Dam. 1 H318,  
 Skin Sens. 1 H317, Aquatic Chronic 3 H412

**4,4 Methylenebis (cyclohexylamine)**  
 Acute Tox. 4 H302, STOT RE 2 H373, Skin Corr. 1B H314, Eye Dam. 1 H318,  
 Skin Sens. 1 H317

The full wording of hazard (H) phrases is given in section 16 of the sheet.

# DRACO ITALIANA S.p.A.

## DRAP129 - ARMOFIX MTX COMP. B

Revision nr.7  
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Page n. 3 / 15  
Replaced revision:6 (Dated 10/06/2021)

EN

### SECTION 4. First aid measures

#### 4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.

INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

### SECTION 5. Firefighting measures

#### 5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

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

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products.

#### 5.3. Advice for firefighters

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

### SECTION 6. Accidental release measures

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

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

#### 6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

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

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

#### 6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

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## DRAP129 - ARMOFIX MTX COMP. B

Revision nr.7  
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Page n. 4 / 15  
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EN

### SECTION 7. Handling and storage

#### 7.1. Precautions for safe handling

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

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

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

#### 7.3. Specific end use(s)

Information not available

### SECTION 8. Exposure controls/personal protection

#### 8.1. Control parameters

#### Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia

##### Predicted no-effect concentration - PNEC

|                                                       |       |         |
|-------------------------------------------------------|-------|---------|
| Normal value in fresh water                           | 0,015 | mg/l    |
| Normal value in marine water                          | 0,014 | mg/l    |
| Normal value for fresh water sediment                 | 0,132 | mg/kg/d |
| Normal value for marine water sediment                | 0,125 | mg/kg/d |
| Normal value for water, intermittent release          | 0,15  | mg/l    |
| Normal value of STP microorganisms                    | 7,5   | mg/l    |
| Normal value for the food chain (secondary poisoning) | 6,93  | mg/kg   |
| Normal value for the terrestrial compartment          | 0,018 | mg/kg/d |

##### Health - Derived no-effect level - DNEL / DMEL

| Route of exposure | Effects on consumers |          |         |          | Effects on workers |               |         |                      |
|-------------------|----------------------|----------|---------|----------|--------------------|---------------|---------|----------------------|
|                   | Acute                | Acute    | Chronic | Chronic  | Acute              | Acute         | Chronic | Chronic              |
|                   | local                | systemic | local   | systemic | local              | systemic      | local   | systemic             |
| Inhalation        |                      |          |         |          |                    | 1,36<br>mg/m3 |         |                      |
| Skin              |                      |          |         |          |                    |               |         | 2,5<br>mg/kg<br>bw/d |

#### Alcol benzilico

##### Predicted no-effect concentration - PNEC

|                                              |       |         |
|----------------------------------------------|-------|---------|
| Normal value in fresh water                  | 1     | mg/l    |
| Normal value in marine water                 | 0,1   | mg/l    |
| Normal value for fresh water sediment        | 5,27  | mg/kg/d |
| Normal value for marine water sediment       | 0,527 | mg/kg/d |
| Normal value for water, intermittent release | 2,3   | mg/l    |
| Normal value of STP microorganisms           | 39    | mg/l    |
| Normal value for the terrestrial compartment | 0,466 | mg/kg/d |

##### Health - Derived no-effect level - DNEL / DMEL

| Route of exposure | Effects on consumers |                  |         |                 | Effects on workers |                     |         |                    |
|-------------------|----------------------|------------------|---------|-----------------|--------------------|---------------------|---------|--------------------|
|                   | Acute                | Acute            | Chronic | Chronic         | Acute              | Acute               | Chronic | Chronic            |
|                   | local                | systemic         | local   | systemic        | local              | systemic            | local   | systemic           |
| Oral              |                      | 20<br>mg/kg bw/d |         | 4<br>mg/kg bw/d |                    |                     |         |                    |
| Inhalation        |                      | 27<br>mg/m3      |         | 5,4<br>mg/m3    |                    | 110<br>mg/m3        |         | 22<br>mg/m3        |
| Skin              |                      | 20<br>mg/kg bw/d |         | 4<br>mg/kg bw/d |                    | 40<br>mg/kg<br>bw/d |         | 8<br>mg/kg<br>bw/d |

## DRAP129 - ARMOFIX MTX COMP. B

## SECTION 8. Exposure controls/personal protection ... / &gt;&gt;

## 2-piperazin-1-ilettilamina

## Predicted no-effect concentration - PNEC

|                                              |        |       |
|----------------------------------------------|--------|-------|
| Normal value in fresh water                  | 0,058  | mg/l  |
| Normal value in marine water                 | 0,0058 | mg/l  |
| Normal value for fresh water sediment        | 215    | mg/kg |
| Normal value for marine water sediment       | 21,5   | mg/kg |
| Normal value for water, intermittent release | 0,58   | mg/l  |
| Normal value of STP microorganisms           | 250    | mg/l  |
| Normal value for the terrestrial compartment | 42,9   | mg/kg |

## Health - Derived no-effect level - DNEL / DMEL

| Route of exposure | Effects on consumers |                   |                 |                   | Effects on workers |                     |                 |                      |
|-------------------|----------------------|-------------------|-----------------|-------------------|--------------------|---------------------|-----------------|----------------------|
|                   | Acute                | Acute             | Chronic         | Chronic           | Acute              | Acute               | Chronic         | Chronic              |
|                   | local                | systemic          | local           | systemic          | local              | systemic            | local           | systemic             |
| Oral              |                      | 1,5<br>mg/kg bw/d |                 | 0,3<br>mg/kg bw/d |                    |                     |                 |                      |
| Inhalation        |                      | 5,3<br>mg/m3      |                 | 0,9<br>mg/m3      |                    | 21,4<br>mg/m3       |                 | 3,6<br>mg/m3         |
| Skin              | 0,02<br>mg/cm2       | 10<br>mg/kg bw/d  | 0,003<br>mg/cm2 | 1,7<br>mg/kg bw/d | 0,04<br>mg/cm2     | 20<br>mg/kg<br>bw/d | 0,006<br>mg/cm2 | 3,3<br>mg/kg<br>bw/d |

## 4,4 Methylenebis (cyclohexylamine)

## Predicted no-effect concentration - PNEC

|                                              |       |         |
|----------------------------------------------|-------|---------|
| Normal value in fresh water                  | 0,08  | mg/l    |
| Normal value in marine water                 | 0,008 | mg/l    |
| Normal value for fresh water sediment        | 137   | mg/kg/d |
| Normal value for marine water sediment       | 13,7  | mg/kg/d |
| Normal value for water, intermittent release | 0,08  | mg/l    |
| Normal value of STP microorganisms           | 3,2   | mg/l    |
| Normal value for the terrestrial compartment | 27,2  | mg/kg/d |

## Health - Derived no-effect level - DNEL / DMEL

| Route of exposure | Effects on consumers |          |         |                    | Effects on workers |          |         |                      |
|-------------------|----------------------|----------|---------|--------------------|--------------------|----------|---------|----------------------|
|                   | Acute                | Acute    | Chronic | Chronic            | Acute              | Acute    | Chronic | Chronic              |
|                   | local                | systemic | local   | systemic           | local              | systemic | local   | systemic             |
| Oral              |                      |          |         | 0,06<br>mg/kg bw/d |                    |          |         |                      |
| Inhalation        |                      |          |         | 0,21<br>mg/m3      |                    |          |         | 1<br>mg/m3           |
| Skin              |                      |          |         |                    |                    |          |         | 0,1<br>mg/kg<br>bw/d |

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

## 8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

## HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

## SKIN PROTECTION

Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

## EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

## RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required. Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

**DRAP129 - ARMOFIX MTX COMP. B****SECTION 8. Exposure controls/personal protection ... / >>**

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

**ENVIRONMENTAL EXPOSURE CONTROLS**

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

**SECTION 9. Physical and chemical properties****9.1. Information on basic physical and chemical properties**

| Properties                             | Value                      | Information |
|----------------------------------------|----------------------------|-------------|
| Appearance                             | pasty liquid               |             |
| Colour                                 | transparent white          |             |
| Odour                                  | characteristic             |             |
| Odour threshold                        | Not available              |             |
| pH                                     | 8                          |             |
| Melting point / freezing point         | Not available              |             |
| Initial boiling point                  | Not available              |             |
| Boiling range                          | Not available              |             |
| Flash point                            | > 60 °C                    |             |
| Evaporation rate                       | Not available              |             |
| Flammability (solid, gas)              | Not available              |             |
| Lower inflammability limit             | Not available              |             |
| Upper inflammability limit             | Not available              |             |
| Lower explosive limit                  | Not available              |             |
| Upper explosive limit                  | Not available              |             |
| Vapour pressure                        | Not available              |             |
| Vapour density                         | Not available              |             |
| Relative density                       | 1,2 g/cm <sup>3</sup>      |             |
| Solubility                             | partially soluble in water |             |
| Partition coefficient: n-octanol/water | Not available              |             |
| Auto-ignition temperature              | Not available              |             |
| Decomposition temperature              | Not available              |             |
| Viscosity                              | Not available              |             |
| Explosive properties                   | Not available              |             |
| Oxidising properties                   | Not available              |             |

**9.2. Other information**

VOC (Directive 2010/75/EC) : 80,00 % - 960,00 g/litre

**SECTION 10. Stability and reactivity****10.1. Reactivity**

There are no particular risks of reaction with other substances in normal conditions of use.

**10.2. Chemical stability**

The product is stable in normal conditions of use and storage.

**10.3. Possibility of hazardous reactions**

No hazardous reactions are foreseeable in normal conditions of use and storage.

**10.4. Conditions to avoid**

None in particular. However the usual precautions used for chemical products should be respected.

**10.5. Incompatible materials**

Information not available

## DRAP129 - ARMOFIX MTX COMP. B

## SECTION 10. Stability and reactivity ... / &gt;&gt;

## 10.6. Hazardous decomposition products

Formaldehyde, polymer with benzenamine, hydrogenated

Organic decomposition products containing nitrogen. carbon monoxide, carbon dioxide

## SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

## 11.1. Information on toxicological effects

Alcol benzilico

Inhalation: Vapor may irritate the respiratory tract / lungs. Vapors can irritate the throat / respiratory tract. Symptoms following overexposure may include the following: Cough. Vapors can cause headache, fatigue, dizziness and nausea. Harmful by inhalation.

Ingestion: Harmful if swallowed. Nausea, vomiting. Diarrhea. Headache. The ingestion of large quantities can cause unconsciousness.

Skin contact: Prolonged and frequent contact may cause redness and irritation.

Eye contact: Causes serious eye irritation.

2-piperazin-1-iletilamina

Inhalation: Gases or vapors in high concentrations can irritate the respiratory tract.

Ingestion: Harmful if swallowed.

Skin contact: Causes severe burns. Toxic in contact with the skin. May cause an allergic skin reaction.

Contact with eyes: Causes serious eye damage.

4,4 Methylenebis (cyclohexylamine)

Inhalation: Gas or vapor in high concentrations may irritate the respiratory tract.

Ingestion: Harmful if swallowed. It can cause burns in mucous membranes, in the throat, in the esophagus and in the stomach. May cause damage to organs (Liver) in case of prolonged or repeated exposure if swallowed.

Skin contact: Causes severe burns. May cause sensitization by skin contact.

Eye contact: Causes serious eye damage.

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

|                                  |             |
|----------------------------------|-------------|
| ATE (Inhalation) of the mixture: | > 20 mg/l   |
| ATE (Oral) of the mixture:       | >2000 mg/kg |
| ATE (Dermal) of the mixture:     | >2000 mg/kg |

Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia

LD50 (Oral) 2885,3 mg/kg Rat. OECD 401

LD50 (Dermal) 2979,7 mg/kg Rabbit, OECD 402

LC50 (Inhalation) > 0,74 mg/l/8h Rat. OECD 403

Alcol benzilico

LD50 (Oral) 1620 mg/kg Ratto

LD50 (Dermal) 2001 mg/kg Ratto

LC50 (Inhalation) 11 mg/l Ratto

**DRAP129 - ARMOFIX MTX COMP. B****SECTION 11. Toxicological information ... / >>**

Formaldehyde, polymer with benzenamine, hydrogenated

LD50 (Oral) > 1000 mg/kg Rat

LD50 (Dermal) 2001 mg/kg Rabbit

4,4 Methylenebis (cyclohexylamine)

LD50 (Oral) 625 mg/kg Rat

LD50 (Dermal) 2110 mg/kg Rabbit

2-piperazin-1-iletilamina

LD50 (Oral) 500 mg/kg

LD50 (Dermal) 866 mg/kg Rat

Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia

Repeated dose toxicity Product:

Species: Rat, male and female

NOAEL:> 250 mg / kg

Application method: Dermal

Exposure time: 90 Days Exposure number: 5 d Next observation period: 28 days

Method: Subchronic toxicity

Species: Rat, male and female

NOAEL:> 239 mg / kg

Application method: oral (food)

Exposure time: 31 Days Method: Subacute toxicity

Species: Rat, male and female

NOAEL: 100 mg / kg

Application method: Dermal

Exposure time: 28 Days Exposure number: 5 d Method: Subacute toxicity

Alcol benzilico

Repeated dose toxicity

Species: rat, male and female

NOEX: 400 mg / kg, 1072

Method of application: inhalation

Atomosphere test: dust / fog

Exposure time: 4 w

Number of exhibitions: 6 h

Method: OECD 412

**SKIN CORROSION / IRRITATION**

Corrosive for the skin

Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia

Species: Rabbit

Method: Guideline 404 for the OECD Test

Result: Corrosive after 1 to 4 hours of exposure

Formaldehyde, polymer with benzenamine, hydrogenated

The substance was corrosive in an in vitro Corrositex test. Signs of irritation / corrosivity were also observed in acute oral and dermal toxicity tests with this material and in tests with similar substances.

Alcol benzilico

Species: rabbit

Assessment: no skin irritation

Method: OECD 404

2-piperazin-1-iletilamina

Corrosive to the skin.

4,4 Methylenebis (cyclohexylamine)

Corrosive to the skin.

**SERIOUS EYE DAMAGE / IRRITATION**

Causes serious eye damage

**DRAP129 - ARMOFIX MTX COMP. B****SECTION 11. Toxicological information ... / >>**

Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia

Species: Rabbit Evaluation: Corrosive Method: Guideline 405 for the OECD Test Result: Irreversible effects on the eyes

Alcol benzilico

Species: rabbit

Evaluation: irritating

Method: OECD 405

Result: irritating to the eyes

2-piperazin-1-iletilamina

Causes serious eye damage.

4,4 Methylenebis (cyclohexylamine)

Risk of serious eye damage.

**RESPIRATORY OR SKIN SENSITISATION**

Sensitising for the skin

Skin sensitization

Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia

Route of exposure: Skin Species: Guinea pig Result: Does not cause skin sensitization.

Alcol benzilico

Species: Guinea pig

Method: OECD 406

Result: Not sensitizing.

Species: Guinea pig

Result: does not cause skin sensitization

4,4 Methylenebis (cyclohexylamine)

Sensitizing.

**GERM CELL MUTAGENICITY**

Does not meet the classification criteria for this hazard class

Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia

Genotoxicity in vitro

Concentration: 0 - 10000 ug / plate Metabolic activation: with or without metabolic activation Method: Guideline 471 for the OECD

Test Result: negative

Metabolic activation: with or without metabolic activation

Method: OECD Test Guideline 476

Result: negative

Genotoxicity in vivo

Application method: Oral Doses: 500 mg / kg Method: OECD Test Guideline 474 Result: negative

Alcol benzilico

Method of application: intraperitoneal injection

Dose: 200 mg / kg

Method: OECD 474

Result: negative

4,4 Methylenebis (cyclohexylamine)

Genotoxicity - in vitro Ames test: Negative.

**CARCINOGENICITY**

Does not meet the classification criteria for this hazard class

Alcol benzilico

NOAEL 200 mg / kg / day, Oral, Mouse OECD 453

NOAEL> 400 mg / kg bw / day, Oral, Rat OECD 451 Based on available data the classification criteria are not met.

NOALE: 400 mg / kg, oral, Rat (103 weeks of exposure, 5 times a day). Method: OECD 453

## DRAP129 - ARMOFIX MTX COMP. B

## SECTION 11. Toxicological information ... / &gt;&gt;

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

Alcol benzilico

Based on available data, the classification criteria are not met. Fertility - NOAEL 1072 mg / kg bw / day, Inhalation, Rat

Species: mouse, female

Method of application: oral

General toxicity in mothers: lowest observed toxicity level: 550 mg / kg bw

Result: no teratogenic effect

Adverse effects on sexual function and fertility

Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia

Species: Rat, male and female Application method: Dermal Method: Guideline 421 for the OECD Test Result: Animal tests did not result in fertility effects.

2-piperazin-1-iletilamina

Contiene una sostanza/un gruppo di sostanze che possono nuocere alla fertilità.

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

Formaldehide, polymer with benzenamine, hydrogenated

NOAEL 15 mg / kg bw / day, Oral, Rat

Alcol benzilico

NOAEL 400 mg / kg, Oral, Rat

Species: rat, male and female

NOEC: 400 mg / kg

Method of application: inhalation

Test atmosphere: dust / fog

Exposure time: 4 w

Exposure number: 6 h

Method: OECD 412

4,4 Methylenebis (cyclohexylamine)

May cause damage to organs (Liver) in case of prolonged or repeated exposure if swallowed.

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

## SECTION 12. Ecological information

This product is dangerous for the environment and the aquatic organisms. In the long term, it have negative effects on aquatic environment.

**12.1. Toxicity**

Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia

Toxicity to fish

EC50 (Oncorhynchus mykiss (rainbow trout)): > 15 mg / l Exposure time: 96 h Type of test: Semi-static test Substance to be tested: Fresh water Method: Guideline 203 for the OECD Test LC50: 772.14 mg / l Exposure time: 96 h Type of test: Static test Test substance: Seawater Method: OECD Test Guideline 203

Toxicity for aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 80 mg / l Exposure time: 48 h Type of test: Static test Substance to be tested: Fresh water Method: OECD TG 202 EC50 (Acartia tonsa): 418.34 mg / l Exposure time: 48 h Type of test: Static test Substance to be tested: Sea water

Toxicity for algae / aquatic plants

CE50r (Selenastrum capricornutum (green alga)): 15 mg / l Exposure time: 72 h Type of test: Static test Substance to be tested: Fresh water Method: OECD TG 201

## DRAP129 - ARMOFIX MTX COMP. B

## SECTION 12. Ecological information ... / &gt;&gt;

Formaldehyde, polymer with benzenamine, hydrogenated  
Acute toxicity microorganisms - EC50, 3 hours: 187 mg / l, activated sludge

Alcol benzilico  
It is not considered toxic to fish.  
LC50, 96 hours: 10 mg / l, *Lepomis macrochirus* (Perch)  
Acute toxicity microorganisms - CI50, 49 hours: 2100 mg / l, activated sludge

4,4 Methylenebis (cyclohexylamine)  
CL0, 96 hours: 46 mg / L, *Leuciscus idus* (golden Ido)  
EC50, 72 hours: 140 - 200 mg / L, Algae

Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia  
LC50 - for Fish > 15 mg/l/96h *Oncorhynchus mykiss*. OECD 203, semisatic test  
EC50 - for Crustacea 80 mg/l/48h *Daphnia magna*. OECD 202  
EC50 - for Algae / Aquatic Plants 15 mg/l/72h *Selenastrum capricornutum*, OECD 201

Alcol benzilico  
LC50 - for Fish 460 mg/l/96h *Pimephales promelas*, OECD 203  
EC50 - for Crustacea 230 mg/l/48h *Daphnia magna*, OECD 202  
EC50 - for Algae / Aquatic Plants 770 mg/l/72h *Selenastrum capricornutum*, OECD 201, static test  
Chronic NOEC for Crustacea 51 mg/l *Daphnia magna*, 21 d, OECD 211, semistatic test  
Chronic NOEC for Algae / Aquatic Plants 310 mg/l *Pseudokirchneriella subcapitata*, OECD 201

Formaldehyde, polymer with benzenamine, hydrogenated  
LC50 - for Fish 63 mg/l/96h *Poecilia reticulata*  
EC50 - for Crustacea 15,4 mg/l/48h *Daphnia magna*  
EC50 - for Algae / Aquatic Plants 43,9 mg/l/72h Algae

4,4 Methylenebis (cyclohexylamine)  
LC50 - for Fish > 100 mg/l/96h *Leuciscus idus*  
EC50 - for Crustacea 6,84 mg/l/48h *Daphnia magna*  
EC50 - for Algae / Aquatic Plants > 140 mg/l/72h  
Chronic NOEC for Crustacea 4 mg/l *Daphnia magna*, 604 h

2-piperazin-1-iletilamina  
LC50 - for Fish 2190 mg/l/96h  
EC50 - for Crustacea 58 mg/l/48h *Daphnia magna*  
EC50 - for Algae / Aquatic Plants > 1000 mg/l/72h Algae

## 12.2. Persistence and degradability

Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia  
biodegradation  
Inoculum: Mixture Result: Not biodegradable. Biodegradation: 0% Exposure time: 28 d Method: OECD TG 301 B

Stability in water  
Half-life for degradation (TD50): 12 Months (25 ° C) pH: 6.5 Method: No information available. Observations: Fresh water

Alcol benzilico  
Degradation 92 - 96%: 14 days OECD 301C  
Degradation 95 - 97%: 21 days OECD 301A

Inoculum: waste water (STP outflow)  
Concentration: 20mg / l  
Result: rapidly biodegradable  
Biodegradation: 95-97%  
Exposure time: 21 d  
Method: OECD 301 A

Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia  
Solubility in water 100 g/l

## DRAP129 - ARMOFIX MTX COMP. B

## SECTION 12. Ecological information ... / &gt;&gt;

Alcol benzilico  
Rapidly degradable

Formaldehyde, polymer with benzenamine, hydrogenated  
NOT rapidly degradable

4,4 Methylenebis (cyclohexylamine)  
NOT rapidly degradable

2-piperazin-1-iletilamina  
NOT rapidly degradable

## 12.3. Bioaccumulative potential

4,4 Methylenebis (cyclohexylamine)  
The product is insoluble in water.

Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia  
Partition coefficient: n-octanol/water 1,34 Log Kow 25°C

Alcol benzilico  
Partition coefficient: n-octanol/water 1,1  
BCF 1

4,4 Methylenebis (cyclohexylamine)  
Partition coefficient: n-octanol/water 2,03

2-piperazin-1-iletilamina  
Partition coefficient: n-octanol/water -1,48 Log Kow

## 12.4. Mobility in soil

Alcol benzilico  
Surface tension 39 mN / m @ 20 ° C OECD 115  
Koc: 5-15

## 12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage  $\geq$  than 0,1%.

## 12.6. Other adverse effects

Information not available

## SECTION 13. Disposal considerations

## 13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

## SECTION 14. Transport information

## 14.1. UN number

ADR / RID, IMDG, IATA: 2735

**DRAP129 - ARMOFIX MTX COMP. B****SECTION 14. Transport information ... / >>****14.2. UN proper shipping name**

ADR / RID: AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S. MIXTURE  
 IMDG: AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S. MIXTURE  
 IATA: AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S. MIXTURE

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

ADR / RID: Class: 8 Label: 8



IMDG: Class: 8 Label: 8



IATA: Class: 8 Label: 8

**14.4. Packing group**

ADR / RID, IMDG, IATA: II

**14.5. Environmental hazards**

ADR / RID: NO  
 IMDG: NO  
 IATA: NO

**14.6. Special precautions for user**

|            |                      |                         |                              |
|------------|----------------------|-------------------------|------------------------------|
| ADR / RID: | HIN - Kemler: 80     | Limited Quantities: 1 L | Tunnel restriction code: (E) |
|            | Special provision: - |                         |                              |
| IMDG:      | EMS: F-A, S-B        | Limited Quantities: 1 L |                              |
| IATA:      | Cargo:               | Maximum quantity: 30 L  | Packaging instructions: 855  |
|            | Pass.:               | Maximum quantity: 1 L   | Packaging instructions: 851  |
|            | Special provision:   | A3, A803                |                              |

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

Information not relevant

**SECTION 15. Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Seveso Category - Directive 2012/18/EC: None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product

Point 3

Contained substance

|       |    |                                      |
|-------|----|--------------------------------------|
| Point | 75 | 2-piperazin-1-iletamina              |
|       |    | Reg. no.: 01-2119471486-30-XXXX      |
| Point | 75 | 2,4,6-Tri-(dimetilaminometil) fenolo |
|       |    | Reg. no.: 01-2119560597-27-XXXX      |

Regulation (EC) No. 2019/1148 - on the marketing and use of explosives precursors

Not applicable

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage  $\geq$  than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

**DRAP129 - ARMOFIX MTX COMP. B****SECTION 15. Regulatory information ... / >>**Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

**15.2. Chemical safety assessment**

A chemical safety assessment has been performed for the following contained substances

Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia

Formaldehyde, polymer with benzenamine, hydrogenated

Alcol benzilico

4,4 Methylenebis (cyclohexylamine)

**SECTION 16. Other information**

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

|                          |                                                                    |
|--------------------------|--------------------------------------------------------------------|
| <b>Acute Tox. 3</b>      | Acute toxicity, category 3                                         |
| <b>Acute Tox. 4</b>      | Acute toxicity, category 4                                         |
| <b>STOT RE 2</b>         | Specific target organ toxicity - repeated exposure, category 2     |
| <b>Skin Corr. 1B</b>     | Skin corrosion, category 1B                                        |
| <b>Skin Corr. 1C</b>     | Skin corrosion, category 1C                                        |
| <b>Eye Dam. 1</b>        | Serious eye damage, category 1                                     |
| <b>Eye Irrit. 2</b>      | Eye irritation, category 2                                         |
| <b>Skin Sens. 1</b>      | Skin sensitization, category 1                                     |
| <b>Aquatic Chronic 3</b> | Hazardous to the aquatic environment, chronic toxicity, category 3 |
| <b>H311</b>              | Toxic in contact with skin.                                        |
| <b>H302</b>              | Harmful if swallowed.                                              |
| <b>H332</b>              | Harmful if inhaled.                                                |
| <b>H373</b>              | May cause damage to organs through prolonged or repeated exposure. |
| <b>H314</b>              | Causes severe skin burns and eye damage.                           |
| <b>H318</b>              | Causes serious eye damage.                                         |
| <b>H319</b>              | Causes serious eye irritation.                                     |
| <b>H317</b>              | May cause an allergic skin reaction.                               |
| <b>H412</b>              | Harmful to aquatic life with long lasting effects.                 |

**LEGEND:**

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value

**DRAP129 - ARMOFIX MTX COMP. B****SECTION 16. Other information ... / >>**

- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

**GENERAL BIBLIOGRAPHY**

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
4. Regulation (EU) 2015/830 of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
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14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2018/1480 (XIII Atp. CLP)
16. Regulation (EU) 2019/521 (XII Atp. CLP)
17. Regulation (EU) 2019/1148
18. Regulation (EU) 2020/217 (XIV Atp. CLP)

- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

**Note for users:**

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

**CALCULATION METHODS FOR CLASSIFICATION**

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

**Changes to previous review:**

The following sections were modified:

14.