

MASTIDEK (Part A)

REV. 02 - 02/2022
PRINT DATE - 02/2022

Section 1

Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Code:
MASTIDEKFAST_CAR_A

Product name:
MASTIDEK FAST CARTRIDGE PART A

UFI code:
NRM0-C05K-U00A-T027

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

Intended use:
BICOMPONENT GLUE IN CARTRIDGE - PART A

Identified uses:
ADHESIVE SYSTEM/TREATMENT FOR STONE
SECTOR (INDUSTRIAL AND PROFESSIONAL)

1.3 Details of the manufacturer/supplier of the safety data sheet

Manufacturer:
Tenax Spa
Via I Maggio, 226
37020 Volargne (VR) - Italy
Phone: +39 045 6887593 - Fax: +39 045 6862456
E-mail: msds@tenax.it

Supplier:
Cosentino Global S.L.U.,
Ctra. A334, Baza-Huércal Overa, km 59
04850 Cantoria (Almería) - Spain
Phone: +34 950 444 175
E-mail: info@cosentino.com
Website: www.cosentino.com

1.4 Emergency telephone number

ChemTel Inc. (24/7/365, multilingual):
Worldwide: +1-813-248-0585
United States: 1-800-255-3924 (free toll)
Australia: 1-300-954-583
China: 400-120-0751
India: 000-800-100-4086
Mexico: 01-800-099-0731
Brazil: 0-800-591-6042

**For information on emergency phone numbers
of EU national authorities you may check:**
[https://echa.europa.eu/documents/10162/2322249/
emergency_phone_numbers_en.pdf/d911af43-4bcf-
9371-a59d-a20736d91e7d?t=1628515444598](https://echa.europa.eu/documents/10162/2322249/emergency_phone_numbers_en.pdf/d911af43-4bcf-9371-a59d-a20736d91e7d?t=1628515444598)



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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 2020/878.

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:

H319 - Eye irritation, Category 2 - Causes serious eye irritation.

H317 - Skin sensitization, Category 1 - May cause an allergic skin reaction.

H412 - Hazardous to the aquatic environment, chronic toxicity, Category 3 - 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



Signal words:

Warning

Hazard statements:

H319 - Causes serious eye irritation.

H317 - May cause an allergic skin reaction.

H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements:

P280: Wear protective gloves / eye protection / face protection.

P261: Avoid breathing dust / fume / gas / mist / vapours / spray.

P333+P313: If skin irritation or rash occurs: Get medical advice / attention.

P337+P313: If eye irritation persists: Get medical advice / attention.

Contains:

N-(3-(TRIMETHOXYSILYL)PROPYL)
ETHYLENEDIAMINE.

Aminefunctional resin.

3-AMINOPROPYLTRIETHOXYSILANE.

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 %.

The product does not contain substances with endocrine disrupting properties in concentration \geq 0.1 %.

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Section 3 Composition/information on ingredients

3.1 Substance

Non-applicable.

3.2 Mixture

Contains:

| IDENTIFICATION | CHEMICAL NAME/CLASSIFICATION | CONCENTRATION |
|------------------------------|---|-------------------|
| CAS: 136210-32-7 | AMINEFUNCTIONAL RESIN | |
| EC: 412-060-9 | Regulation 1272/2008 Skin Sens. 1: H317; Aquatic Chronic 3: H412 | 50 % ≤ x < 100 % |
| Index: 607-350-00-9 | | |
| CAS: 1760-24-3 | N-(3-(TRIMETHOXYSILYL)PROPYL)ETHYLENEDIAMINE | |
| EC: 217-164-6 | Regulation 1272/2008 Eye Dam. 1: H318; STOT SE 3: H335; Skin Sens. 1: H317 | 1 % ≤ x < 3 % |
| Index: - | | |
| REACH: 01-2119970215-39 | | |
| CAS: 919-30-2 | 3-AMINOPROPYLTRIETHOXYSILANE | |
| EC: 213-048-4 | Regulation 1272/2008 Acute Tox. 4: H302; Skin Corr. 1B: H314; Eye Dam. 1: H318; Skin Sens. 1: H317; STA Oral: 500 mg/Kg | 0.8 % ≤ x < 0.9 % |
| Index: 612-108-00-0 | | |
| REACH: 01-2119480479-24 | | |
| CAS: 77-58-7 | DIBUTYLTIN DILAURATE | |
| EC: 201-039-8 | Regulation 1272/2008 Muta. 2: H341; Repr. 1B: H360FD; STOT SE 1: H370; STOT RE 1: H372; Skin Corr. 1C: H314; Eye Dam. 1: H318; Skin Sens. 1: H317; Aquatic Acute 1: H400 M=1; Aquatic Chronic 1: H410 M=1 | 0 % ≤ x < 0.05 % |
| Index: - | | |
| REACH: 01-2119496068-27-0000 | | |

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

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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).

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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 datasheet) 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.

Section 7 Handling and storage

7.1 Precautions for safe handling

Before handling the product, consult all the other sections of this material safety datasheet. 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.

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Section 8 Exposure controls/ personal protection

8.1 Control parameters

Regulatory References:

| | | |
|-----|----------------|--|
| BGR | България | НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. ЗА ЗАЩИТА НА РАБОТЕЩИТЕ ОТ РИСКОВЕ, СВЪРЗАНИ С ЕКСПОЗИЦИЯ НА ХИМИЧНИ АГЕНТИ ПРИ РАБОТА (изм. ДВ. бр.5 от 17 Януари 2020г.) |
| DEU | Deutschland | Technischen Regeln für Gefahrstoffe (TRGS 900) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte. MAK- und BAT-Werte-Liste 2020, Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Mitteilung 56 |
| DNK | Danmark | Bekendtgørelse om grænseværdier for stoffer og materialer - BEK nr 1458 af 13/12/2019 |
| ESP | España | Límites de exposición profesional para agentes químicos en España 2021 |
| FRA | France | Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS |
| FIN | Suomi | HTP-VÄRDEN 2020. Koncentrationer som befunnits skadliga. SOCIAL - OCH HÄLSOVÅRDSDMINISTERIETS PUBLIKATIONER 2020:25 |
| GRC | Ελλάδα | Π.Δ. 26/2020 (ΦΕΚ 50/Α` 6.3.2020) Εναρμόνιση της ελληνικής νομοθεσίας προς τις διατάξεις των οδηγιών 2017/2398/ΕΕ, 2019/130/ΕΕ και 2019/983/ΕΕ για την τροποποίηση της οδηγίας 2004/37/ΕΚ "σχετικά με την προστασία των εργαζομένων από τους κινδύνους που συνδέονται με την έκθεση σε καρκινογόνους ή μεταλλαξιογόνους παράγοντες κατά την εργασία" |
| HRV | Hrvatska | Pravilnik o izmjenama i dopunama Pravilnika o zaštiti radnika od izloženosti opasnimkemičalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 1/2021) |
| NOR | Norge | Forskrift om endring i forskrift om tiltaksverdier og grenseverdier for fysiske og kjemiske faktorer i arbeidsmiljøet samt smitterisikogrupper for biologiske faktorer (forskrift om tiltaks- og grenseverdier), 21. august 2018 nr. 1255 |
| POL | Polska | Rozporządzenie ministra rozwoju, pracy i technologii z dnia 18 lutego 2021 r. Zmieniające rozporządzenie w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy |
| ROU | România | Hotărârea nr. 53/2021 pentru modificarea hotărârii guvernului nr. 1.218/2006, precum și pentru modificarea și completarea hotărârii guvernului nr. 1.093/2006 |
| SWE | Sverige | Hygieniska gränsvärden, Arbetsmiljöverkets föreskrifter och allmänna råd om hygieniska gränsvärden (AFS 2018:1) |
| SVN | Slovenija | Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu (Uradni list RS, št. 100/01, 39/05, 53/07, 102/10, 43/11 – ZVZD-1, 38/15, 78/18 in 78/19) |
| GBR | United Kingdom | EH40/2005 Workplace exposure limits (Fourth Edition 2020) |
| EU | OEL EU | Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC. |
| | TLV-ACGIH | ACGIH 2021 |

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CALCIUM CARBONATE

THRESHOLD LIMIT VALUE

| TYPE | COUNTRY | TWA/8 h | | STEL/15 min | | REMARKS / OBSERVATIONS | |
|-----------|---------|-------------------|-----|-------------------|-----|------------------------|---|
| | | mg/m ³ | ppm | mg/m ³ | ppm | | |
| AGW | DEU | 10 | - | - | - | INHAL | - |
| AGW | DEU | 3 | - | - | - | RESP | - |
| TLV | DNK | 10 | - | - | - | INHAL | - |
| TLV | DNK | 5 | - | - | - | RESP | - |
| VLA | ESP | 10 | - | - | - | - | - |
| VLEP | FRA | 10 | - | - | - | INHAL | - |
| VLEP | FRA | 5 | - | - | - | RESP | - |
| HTP | FIN | 10 | - | - | - | INHAL | - |
| NDS/NDSch | POL | 10 | - | - | - | - | - |
| WEL | GBR | 4 | - | - | - | - | - |

AMORPHOUS SILICATE HYDRATE

THRESHOLD LIMIT VALUE

| TYPE | COUNTRY | TWA/8 h | | STEL/15 min | | REMARKS / OBSERVATIONS | |
|------|---------|-------------------|-----|-------------------|-----|------------------------|---|
| | | mg/m ³ | ppm | mg/m ³ | ppm | | |
| AGW | DEU | 4 | - | - | - | INHAL | - |
| MAK | DEU | 4 | - | - | - | INHAL | - |
| MV | SVN | 4 | - | - | - | INHAL | - |

TITANIUM DIOXIDE

THRESHOLD LIMIT VALUE

| TYPE | COUNTRY | TWA/8 h | | STEL/15 min | | REMARKS / OBSERVATIONS | |
|-----------|---------|-------------------|-----|-------------------|-----|------------------------|-----------|
| | | mg/m ³ | ppm | mg/m ³ | ppm | | |
| TLV | BGR | 10 | - | - | - | RESP | - |
| TLV | DNK | 6 | - | - | - | - | Som Ti |
| VLA | ESP | 10 | - | - | - | - | - |
| VLEP | GRA | 10 | - | - | - | - | - |
| TLV | GRC | - | 10 | - | - | - | - |
| GVI/KGVI | HRV | 10 | - | - | - | INHAL | - |
| GVI/KGVI | HRV | 4 | - | - | - | RESP | - |
| TLV | NOR | 5 | - | - | - | - | - |
| NDS/NDSch | POL | 10 | - | - | - | INHAL | - |
| TLV | ROU | 10 | - | 15 | - | - | - |
| NGV/KGV | SWE | 5 | - | - | - | - | Totaldamm |
| WEL | GBR | 10 | - | - | - | INHAL | - |
| WEL | GBR | 4 | - | - | - | RESP | - |
| TLV-ACGIH | - | 10 | - | - | - | - | - |

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N-(3-(TRIMETHOXYSILYL)PROPYL)ETHYLENEDIAMINE

PREDICTED NO-EFFECT CONCENTRATION - PNEC

| | |
|--|--------------|
| Normal value in fresh water | 0.062 mg/l |
| Normal value in marine water | 0.0062 mg/l |
| Normal value for fresh water sediment | 0.05 mg/Kg |
| Normal value for marine water sediment | 0.005 mg/Kg |
| Normal value for the terrestrial compartment | 0.0075 mg/Kg |

HEALTH - DERIVED NO-EFFECT LEVEL - DNEL / DMEL

| ROUTE OF EXPOSURE | EFFECTS ON CONSUMERS | | | | EFFECT ON WORKERS | | | |
|-------------------|----------------------|----------|---------|-----------------------|-------------------|----------|---------|------------------------|
| | ACUTE | | CHRONIC | | ACUTE | | CHRONIC | |
| | LOCAL | SYSTEMIC | LOCAL | SYSTEMIC | LOCAL | SYSTEMIC | LOCAL | SYSTEMIC |
| Oral | - | - | - | 2.5 mg/Kg/d | - | - | - | - |
| Inhalation | - | - | - | 8.7 mg/m ³ | - | - | - | 35.5 mg/m ³ |
| Skin | - | - | - | 2.5 mg/Kg/d | - | - | - | 5 mg/Kg/d |

DIBUTYLTIN DILAURATE

THRESHOLD LIMIT VALUE

| TYPE | COUNTRY | TWA/8 h | | STEL/15 min | | REMARKS / OBSERVATIONS |
|------|---------|-------------------|-----|-------------------|-----|------------------------|
| | | mg/m ³ | ppm | mg/m ³ | ppm | |
| OEL | EU | 0.1 | - | 0.2 | - | SKIN - |

PREDICTED NO-EFFECT CONCENTRATION - PNEC

| | |
|---|--------------|
| Normal value in fresh water | 0.00046 mg/l |
| Normal value in marine water | 0.00004 mg/l |
| Normal value for fresh water sediment | 0.05 mg/Kg |
| Normal value for marine water sediment | 0.005 mg/Kg |
| Normal value for water, intermittent release | 0.00463 mg/l |
| Normal value of STP microorganisms | 100 mg/l |
| Normal value for the food chain (secondary poisoning) | 0.2 mg/Kg |
| Normal value for the terrestrial compartment | 0.0407 mg/Kg |

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HEALTH - DERIVED NO-EFFECT LEVEL - DNEL / DMEL

| ROUTE OF EXPOSURE | EFFECTS ON CONSUMERS | | | | EFFECT ON WORKERS | | | |
|-------------------|----------------------|------------------------|---------|-------------------------|-------------------|------------------------|---------|------------------------|
| | ACUTE | | CHRONIC | | ACUTE | | CHRONIC | |
| | LOCAL | SYSTEMIC | LOCAL | SYSTEMIC | LOCAL | SYSTEMIC | LOCAL | SYSTEMIC |
| Oral | VND | 0.01 mg/Kg bw/d | VND | 0.002 mg/Kg bw/d | - | - | - | - |
| Inhalation | VND | 0.02 mg/m ³ | VND | 0.003 mg/m ³ | VND | 0.07 mg/m ³ | VND | 0.01 mg/m ³ |
| Skin | VND | 0.5 mg/Kg bw/d | VND | 0.08 mg/Kg bw/d | VND | 1 mg/Kg bw/d | VND | 0.2 mg/Kg bw/d |

Legend:

(C) = CEILING; INHAL = Inhalable Fraction; RESP = Respirable Fraction; THORA = Thoracic Fraction.
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. 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.

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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.

Hand protection:

Protect hands with work gloves for protection from chemical agents in nitrile or fluoroelastomer (EN 374-1:2016) at least type B or higher based on the risk assessment carried out by the company.

Breakthrough time > 480 minutes.

Material thickness:

- NITRILE
 - short contact > 0.38 mm
 - prolonged contact > 0.55 mm
- FLUOROELASTOMER
 - short contact > 0.50 mm
 - prolonged contact > 1.50 mm

Section 9

Physical and chemical properties

9.1 Information on basic physical and chemical properties

| PROPERTIES | VALUE | INFORMATION |
|---|----------------------------|---|
| Appearance | Pasty liquid | - |
| Colour | As showed in colour folder | - |
| Odour | Characteristic | - |
| Melting point/ freezing point | Not available | - |
| Initial boiling point | Not available | - |
| Flammability | Not available | - |
| Lower explosive limit | Not available | - |
| Upper explosive limit | Not available | - |
| Flash point | > 60 °C | - |
| Auto-ignition temperature | Not available | - |
| pH | Not available | Reason for missing data: substance/mixture is non-polar/aprotic (eg: an organic solvent mixture) |
| Kinematic viscosity | Not available | - |
| Solubility | Insoluble in water | - |
| Partition coefficient: n-octanol/water | Not available | - |
| Vapour pressure | Not available | - |
| Density and/or relative density | 1.1 g/cm ³ | - |
| Relative vapour density | Not available | - |
| Particle characteristics | Not applicable | - |

9.2 Other information

9.2.1 Information with regard to physical hazard classes:

Information not available.

9.2.2 Other safety characteristics:

VOC 0 % (Directive 2010/75/UE).

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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.

10.6 Hazardous decomposition products

Information not available.

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 hazard classes as defined in Regulation (EC) No 1272/2008

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 | Not classified (no significant component) |
| ATE (Oral) of the mixture | Not classified (no significant component) |
| ATE (Dermal) of the mixture | Not classified (no significant component) |
| DIBUTYLTIN DILAURATE | |
| LD50 (Oral) | 2071 mg/Kg (Rat) |
| LD50 (Dermal) | > 2000 mg/Kg (Rat) |
| 3-AMINOPROPYLTRIETHOXYSILANE | |
| STA (Oral) | 500 mg/Kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture) |

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SKIN CORROSION/IRRITATION:

Does not meet the classification criteria for this hazard class.

SERIOUS EYE DAMAGE/IRRITATION:

Causes serious eye irritation.

RESPIRATORY OR SKIN SENSITISATION:

Sensitising for the skin.

Skin sensitization:

Information not available.

GERM CELL MUTAGENICITY:

Does not meet the classification criteria for this hazard class.

CARCINOGENICITY:

Does not meet the classification criteria for this hazard class.

REPRODUCTIVE TOXICITY:

Does not meet the classification criteria for this hazard class.

Adverse effects on sexual function and fertility:

Information not available.

Adverse effects on development of the offspring:

Information not available.

Effects on or via lactation:

Information not available.

STOT - SINGLE EXPOSURE:

Does not meet the classification criteria for this hazard class.

Target organs:

Information not available.

Route of exposure:

Information not available.

STOT - REPEATED EXPOSURE:

Does not meet the classification criteria for this hazard class.

Target organs:

Information not available.

Route of exposure:

Information not available.

ASPIRATION HAZARD:

Does not meet the classification criteria for this hazard class.

11.2 Information on other hazards

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

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Section 12 Ecological information

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

12.1 Toxicity

DIBUTYLTIN DILAURATE

| | |
|--|--|
| LC50 - for Fish | 3.1 mg/l/96 h (Brachydanio rerio) |
| EC50 - for Crustacea | < 0.463 mg/l/48 h (Daphnia magna) |
| EC50 - for Algae / Aquatic Plants | > 1 mg/l/72 h (Desmodesmus subspicatus) |
| Chronic NOEC for Algae / Aquatic Plants | 1000 mg/l 3 h |

12.2 Persistence and degradability

→ DIBUTYLTIN DILAURATE
NOT rapidly degradable.

12.3 Bioaccumulative potential

Information not available.

12.4 Mobility in soil

Information not available.

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 Endocrine disrupting properties

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

12.7 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.

Contaminated packaging:

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

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Section 14 Transport information

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

14.1 UN number or ID number

Not applicable.

14.2 UN proper shipping name

Not applicable.

14.3 Transport hazard class(es)

Not applicable.

14.4 Packing group

Not applicable.

14.5 Environmental hazards

Not applicable.

14.6 Special precautions for user

Not applicable.

14.7 Maritime transport in bulk according to IMO instruments

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/EU:

None.

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

- Product
 - Point: 3 - 40
- Contained substance
 - Point: 75

Regulation (EU) 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.

Substances subject to exportation reporting pursuant to Regulation (EU) 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:

- DIBUTYLTIN DILAURATE

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Section 16 Other information

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

| | |
|-------------------|---|
| Muta. 2 | Germ cell mutagenicity, Category 2 |
| Repr. 1B | Reproductive toxicity, Category 1B |
| STOT SE 1 | Specific target organ toxicity - single exposure, Category 1 |
| Acute Tox. 4 | Acute toxicity, Category 4 |
| STOT RE 1 | Specific target organ toxicity - repeated exposure, Category 1 |
| Skin Corr. 1B | Skin corrosion, Category 1B |
| Eye Dam. 1 | Serious eye damage, Category 1 |
| Eye Irrit. 2 | Eye irritation, Category 2 |
| STOT SE 3 | Specific target organ toxicity - single exposure, Category 3 |
| Skin Sens. 1 | Skin sensitization, Category 1 |
| Aquatic Acute 1 | Hazardous to the aquatic environment, acute toxicity, Category 1 |
| Aquatic Chronic 1 | Hazardous to the aquatic environment, chronic toxicity, Category 1 |
| Aquatic Chronic 3 | Hazardous to the aquatic environment, chronic toxicity, Category 3 |
| H341 | Suspected of causing genetic defects |
| H360FD | May damage fertility May damage the unborn child |
| H370 | Causes damage to organs |
| H302 | Harmful if swallowed |
| H372 | Causes damage to organs through prolonged or repeated exposure |
| H314 | Causes severe skin burns and eye damage |
| H318 | Causes serious eye damage |
| H319 | Causes serious eye irritation |
| H335 | May cause respiratory irritation |
| H317 | May cause an allergic skin reaction |
| H400 | Very toxic to aquatic life |
| H410 | Very toxic to aquatic life with long lasting effects |
| H412 | Harmful to aquatic life with long lasting effects |

Legend:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50 % effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labelling 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: 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: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile Organic Compounds
- vPvB: Very Persistent and Very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German)

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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) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I Atp. CLP) 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 (VII Atp. CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)
14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2019/521 (XII Atp. CLP)
16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
17. Regulation (EU) 2019/1148
18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
21. Delegated Regulation (UE) 2021/849 (XVII 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:
01 / 02 / 03 / 08 / 09 / 11 / 12 / 15 / 16.

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Section 1

Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Code:
MASTIDEKFAST_CAR_B

Product name:
MASTIDEK FAST CARTRIDGE PART B

UFI code:
NUM0-U0V0-400T-FAN9

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

Intended use:
BICOMPONENT GLUE IN CARTRIDGE - PART B

Identified uses:
ADHESIVE SYSTEM/TREATMENT FOR STONE
SECTOR (INDUSTRIAL AND PROFESSIONAL)

1.3 Details of the manufacturer/supplier of the safety data sheet

Manufacturer:
Tenax Spa
Via I Maggio, 226
37020 Volargne (VR) - Italy
Phone: +39 045 6887593 - Fax: +39 045 6862456
E-mail: msds@tenax.it

Supplier:
Cosentino Global S.L.U.,
Ctra. A334, Baza-Huércal Overa, km 59
04850 Cantoria (Almería) - Spain
Phone: +34 950 444 175
E-mail: info@cosentino.com
Website: www.cosentino.com

1.4 Emergency telephone number

ChemTel Inc. (24/7/365, multilingual):
Worldwide: +1-813-248-0585
United States: 1-800-255-3924 (free toll)
Australia: 1-300-954-583
China: 400-120-0751
India: 000-800-100-4086
Mexico: 01-800-099-0731
Brazil: 0-800-591-6042

**For information on emergency phone numbers
of EU national authorities you may check:**
[https://echa.europa.eu/documents/10162/2322249/
emergency_phone_numbers_en.pdf/d911af43-4bcf-
9371-a59d-a20736d91e7d?t=1628515444598](https://echa.europa.eu/documents/10162/2322249/emergency_phone_numbers_en.pdf/d911af43-4bcf-9371-a59d-a20736d91e7d?t=1628515444598)



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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 2020/878.

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:

H332 - Acute toxicity, Category 4 - Harmful if inhaled.
H335 - Specific target organ toxicity - single exposure, Category 3 - May cause respiratory irritation.
H317 - Skin sensitization, Category 1 - May cause an allergic skin reaction.

2.2 Label elements

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

Hazard pictograms



Signal words:

Warning

Hazard statements:

H332 - Harmful if inhaled.
H335 - May cause respiratory irritation.
H317 - May cause an allergic skin reaction.
EUH204 - Contains isocyanates. May produce an allergic reaction.

Precautionary statements:

P280: Wear protective gloves.
P261: Avoid breathing dust / fume / gas / mist / vapours / spray.
P312: Call a POISON CENTRE / doctor / ... if you feel unwell.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.

Contains:

ALIPHATIC POLYISOCYANATE.

As from 24 August 2023, adequate training is required before industrial or professional use.

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 %.

The product does not contain substances with endocrine disrupting properties in concentration \geq 0.1 %.

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Section 3 Composition/information on ingredients

3.1 Substance

Non-applicable.

3.2 Mixture

Contains:

| IDENTIFICATION | CHEMICAL NAME/CLASSIFICATION | CONCENTRATION |
|------------------------------|--|-----------------------|
| CAS: 28182-81-2 | ALIPHATIC POLYISOCYANATE | |
| EC: 500-060-2 | | |
| Index: - | Regulation 1272/2008 Acute Tox. 4: H332; STOT SE 3: H335; Skin Sens. 1: H317; EUH204 STA Inhalation mists/powders: 1.5 mg/l | 50 % ≤ x < 100 % |
| REACH: 01-2119485796-17-XXXX | | |
| CAS: 822-06-0 | HEXAMETHYLENE-DI-ISOCYANATE | |
| EC: 212-485-8 | | |
| Index: 615-011-00-1 | Regulation 1272/2008 Acute Tox. 1: H330; Acute Tox. 4: H302; Eye Irrit. 2: H319; Skin Irrit. 2: H315; STOT SE 3: H335; Resp. Sens. 1: H334; Skin Sens. 1: H317; Classification note according to Annex VI to the CLP Regulation: 2 | 0.354 % ≤ x < 0.404 % |
| REACH: 01-2119457571-37-XXXX | Skin Sens. 1: H317: ≥ 0.5 %; Resp. Sens. 1: H334: ≥ 0.5 % LD50 Oral: 746 mg/Kg; LC50 Inhalation vapours: 0.124 mg/l/4 h | |

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

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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 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

Skin:

Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention immediately. Wash contaminated clothing before using it again.

Ingestion:

Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.

Inhalation:

Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.

4.2 Most important symptoms and effects, both acute and delayed

Cough, pain, choking and difficulty breathing.

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.

Hazardous Combustion Products:

Nitrogen oxides (NO_x), carbon monoxide (CO), carbon dioxide (CO₂), hydrogen cyanide (HCN), isocyanate, pyrolysis 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).

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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 datasheet) 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.

Section 7 Handling and storage

7.1 Precautions for safe handling

Before handling the product, consult all the other sections of this material safety datasheet. 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.

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Section 8 Exposure controls/ personal protection

8.1 Control parameters

Regulatory References:

| | | |
|-----|-----------------|---|
| BGR | България | НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. ЗА ЗАЩИТА НА РАБОТЕЩИТЕ ОТ РИСКОВЕ, СВЪРЗАНИ С ЕКСПОЗИЦИЯ НА ХИМИЧНИ АГЕНТИ ПРИ РАБОТА (изм. ДВ. бр.5 от 17 Януари 2020г.) |
| CZE | Česká Republika | Nařízení vlády č. 41/2020 Sb. Nařízení vlády, kterým se mění nařízení vlády č. 361/2007 Sb., kterým se stanoví podmínky ochrany zdraví při práci, ve znění pozdějších předpisů |
| DEU | Deutschland | Technischen Regeln für Gefahrstoffe (TRGS 900) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte. MAK- und BAT-Werte-Liste 2020, Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Mitteilung 56 |
| DNK | Danmark | Bekendtgørelse om grænseværdier for stoffer og materialer - BEK nr 1458 af 13/12/2019 |
| ESP | España | Límites de exposición profesional para agentes químicos en España 2021 |
| FRA | France | Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS |
| HUN | Magyarország | Az innovációért és technológiáért felelős miniszter 5/2020. (II. 6.) ITM rendelete a kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről |
| NOR | Norge | Forskrift om endring i forskrift om tiltaksverdier og grenseverdier for fysiske og kjemiske faktorer i arbeidsmiljøet samt smitterisikogrupper for biologiske faktorer (forskrift om tiltaks- og grenseverdier), 21. august 2018 nr. 1255 |
| POL | Polska | Rozporządzenie ministra rozwoju, pracy i technologii z dnia 18 lutego 2021 r. Zmieniające rozporządzenie w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy |
| ROU | România | Hotărârea nr. 53/2021 pentru modificarea hotărârii guvernului nr. 1.218/2006, precum și pentru modificarea și completarea hotărârii guvernului nr. 1.093/2006 |
| SWE | Sverige | Hygieniska gränsvärden, Arbetsmiljöverkets föreskrifter och allmänna råd om hygieniska gränsvärden (AFS 2018:1) |
| SVN | Slovenija | Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu (Uradni list RS, št. 100/01, 39/05, 53/07, 102/10, 43/11 – ZVZD-1, 38/15, 78/18 in 78/19) |
| | TLV-ACGIH | ACGIH 2021 |

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ALIPHATIC POLYISOCYANATE

PREDICTED NO-EFFECT CONCENTRATION - PNEC

| | |
|--|--------------|
| Normal value in fresh water | 0.127 mg/l |
| Normal value in marine water | 0.0127 mg/l |
| Normal value for fresh water sediment | 266700 mg/Kg |
| Normal value for marine water sediment | 26670 mg/Kg |
| Normal value for water, intermittent release | 1.27 mg/l |
| Normal value of STP microorganisms | 38.3 mg/l |
| Normal value for the terrestrial compartment | 53182 mg/Kg |

HEALTH - DERIVED NO-EFFECT LEVEL - DNEL / DMEL

| ROUTE OF EXPOSURE | EFFECTS ON CONSUMERS | | | | EFFECT ON WORKERS | | | |
|-------------------|----------------------|----------|---------|----------|---------------------|----------|-----------------------|----------|
| | ACUTE | | CHRONIC | | ACUTE | | CHRONIC | |
| | LOCAL | SYSTEMIC | LOCAL | SYSTEMIC | LOCAL | SYSTEMIC | LOCAL | SYSTEMIC |
| Inhalation | - | - | - | - | 1 mg/m ³ | - | 0.5 mg/m ³ | - |

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HEXAMETHYLENE-DI-ISOCYANATE

THRESHOLD LIMIT VALUE

| TYPE | COUNTRY | TWA/8 h | | STEL/15 min | | REMARKS / OBSERVATIONS | |
|-----------|---------|-------------------|-------|-------------------|-----------|------------------------|-----------------------------|
| | | mg/m ³ | ppm | mg/m ³ | ppm | | |
| TLV | BGR | 0.1 | - | - | - | - | - |
| TLV | CZE | 0.035 | 0.005 | 0.07 | 0.01 | - | - |
| AGW | DEU | 0.035 | 0.005 | 0.035 (C) | 0.005 (C) | - | - |
| MAK | DEU | 0.035 | 0.005 | 0.035 (C) | 0.005 (C) | - | C = 0.070 mg/m ³ |
| TLV | DNK | 0.035 | 0.005 | - | - | - | - |
| VLA | ESP | 0.035 | 0.005 | - | - | - | - |
| VLEP | FRA | 0.075 | 0.01 | 0.15 | 0.02 | - | - |
| AK | HUN | 0.035 | - | 0.035 | - | - | - |
| TLV | NOR | - | 0.005 | - | - | - | - |
| NDS/NDSch | POL | 0.04 | - | 0.08 | - | SKIN | - |
| TLV | ROU | 0.05 | 0.007 | 1 | 0.14 | - | - |
| NGV/KGV | SWE | 0.02 | 0.002 | 0.03 | 0.005 | - | STEL: 5 min |
| MV | SVN | 0.035 | 0.005 | 0.035 | 0.005 | - | - |
| TLV-ACGIH | - | 0.034 | 0.005 | - | - | - | - |

PREDICTED NO-EFFECT CONCENTRATION - PNEC

| | |
|--|-------------|
| Normal value in fresh water | 0.077 mg/l |
| Normal value in marine water | 0.008 mg/l |
| Normal value for fresh water sediment | 0.013 mg/Kg |
| Normal value for marine water sediment | 0.001 mg/Kg |
| Normal value for water, intermittent release | 0.774 mg/l |
| Normal value of STP microorganisms | 8.42 mg/l |
| Normal value for the terrestrial compartment | 0.003 mg/Kg |

HEALTH - DERIVED NO-EFFECT LEVEL - DNEL / DMEL

| ROUTE OF EXPOSURE | EFFECTS ON CONSUMERS | | | | EFFECT ON WORKERS | | | |
|-------------------|----------------------|----------|---------|----------|------------------------|------------------------|-------------------------|-------------------------|
| | ACUTE | | CHRONIC | | ACUTE | | CHRONIC | |
| | LOCAL | SYSTEMIC | LOCAL | SYSTEMIC | LOCAL | SYSTEMIC | LOCAL | SYSTEMIC |
| Inhalation | - | - | - | - | 0.07 mg/m ³ | 0.07 mg/m ³ | 0.035 mg/m ³ | 0.035 mg/m ³ |

Legend:

(C) = CEILING; INHAL = Inhalable Fraction; RESP = Respirable Fraction; THORA = Thoracic Fraction.
VND = hazard identified but no DNEL/PNEC available; NEA = no exposure expected; NPI = no hazard identified.

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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 B 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. 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.

Hand protection:

Protect hands with work gloves for protection from chemical agents in nitrile or fluoroelastomer (EN 374-1:2016) at least type B or higher based on the risk assessment carried out by the company.

Breakthrough time > 480 minutes.
Material thickness:

- NITRILE
 - short contact > 0.38 mm
 - prolonged contact > 0.55 mm
- FLUOROELASTOMER
 - short contact > 0.50 mm
 - prolonged contact > 1.50 mm

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Section 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

| PROPERTIES | VALUE | INFORMATION |
|---|------------------------|---|
| Appearance | Liquid | - |
| Colour | Slight yellow | - |
| Odour | Odourless | - |
| Melting point/ freezing point | Not available | - |
| Initial boiling point | Not available | - |
| Flammability | Not available | - |
| Lower explosive limit | Not available | - |
| Upper explosive limit | Not available | - |
| Flash point | 169,5 °C | - |
| Auto-ignition temperature | Not available | - |
| pH | Not available | Reason for missing data: substance/mixture is non-polar/aprotic (eg: an organic solvent mixture) |
| Kinematic viscosity | Not available | - |
| Dynamic viscosity | 5,380 mPa s | Temperature: 20 °C |
| Solubility | Insoluble in water | - |
| Partition coefficient: n-octanol/water | Not available | - |
| Vapour pressure | Not available | - |
| Density and/or relative density | 1,13 g/cm ³ | - |
| Relative vapour density | Not available | - |
| Particle characteristics | Not applicable | - |

9.2 Other information

9.2.1 Information with regard to physical hazard classes:

Information not available.

9.2.2 Other safety characteristics:

VOC 0 % (Directive 2010/75/UE).

Section 10 Stability and reactivity

10.1 Reactivity

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

→ **HEXAMETHYLENE-DI-ISOCYANATE**
Decomposes at 255 °C/491 °F.
Polymerises at temperatures above 200 °C/392 °F.

10.2 Chemical stability

The product is stable in normal conditions of use and storage.
Maximum processing temperature: 40 °C.

10.3 Possibility of hazardous reactions

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

→ **HEXAMETHYLENE-DI-ISOCYANATE**
May form explosive mixtures with: alcohols, bases.
May react violently with: alcohols, amines, strong bases, oxidising agents, strong acids, water.

Dangerous reactions with water.

10.4 Conditions to avoid

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

→ **HEXAMETHYLENE-DI-ISOCYANATE**
Avoid exposure to: high temperatures, moisture.

Avoid humidity, heat, open flames and other sources of ignition.

10.5 Incompatible materials

→ **HEXAMETHYLENE-DI-ISOCYANATE**
Incompatible with: alcohols, carboxylic acids, amines, strong bases.

Water, oxidants, amines, alcohols.

10.6 Hazardous decomposition products

→ **HEXAMETHYLENE-DI-ISOCYANATE**
May develop: nitric oxide, hydrogen cyanide.

Isocyanate, hydrogen cyanide (HCN).

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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 hazard classes as defined in Regulation (EC) No 1272/2008

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 - mists/powders) of the mixture | 1.50 mg/l |
| ATE (Inhalation - vapours) of the mixture | Acute Tox. 4 |
| ATE (Inhalation - gas) of the mixture | Acute Tox. 4 |
| ATE (Oral) of the mixture | Not classified (no significant component) |
| ATE (Dermal) of the mixture | Not classified (no significant component) |

ALIPHATIC POLYISOCYANATE

| | |
|---------------------------------|---|
| LD50 (Oral) | > 2500 mg/Kg (Rat) |
| LD50 (Dermal) | > 2000 mg/Kg rat (Rat) |
| LC50 (Inhalation mists/powders) | 0.39 mg/l/4 h |
| STA (Inhalation mists/powders) | 1.5 mg/l estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture) |

HEXAMETHYLENE-DI-ISOCYANATE

| | |
|---------------------------|----------------------|
| LD50 (Oral) | 746 mg/Kg (Rat) |
| LD50 (Dermal) | 570 mg/Kg (Rabbit) |
| LC50 (Inhalation vapours) | 0.124 mg/l/4 h (Rat) |

SKIN CORROSION/IRRITATION:

Does not meet the classification criteria for this hazard class.

SERIOUS EYE DAMAGE/IRRITATION:

Does not meet the classification criteria for this hazard class.

RESPIRATORY OR SKIN SENSITISATION:

Sensitising for the skin.

Respiratory sensitization:

Information not available.

Skin sensitization:

Information not available.

GERM CELL MUTAGENICITY:

Does not meet the classification criteria for this hazard class.

CARCINOGENICITY:

Does not meet the classification criteria for this hazard class.

REPRODUCTIVE TOXICITY:

Does not meet the classification criteria for this hazard class.

Adverse effects on sexual function and fertility:

Information not available.

Adverse effects on development of the offspring:

Information not available.

Effects on or via lactation:

Information not available.

STOT - SINGLE EXPOSURE:

May cause respiratory irritation.

Target organs:

Information not available.

Route of exposure:

Information not available.

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STOT - REPEATED EXPOSURE:

Does not meet the classification criteria for this hazard class.

Target organs:

Information not available.

Route of exposure:

Information not available.

ASPIRATION HAZARD:

Does not meet the classification criteria for this hazard class.

11.2 Information on other hazards

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

Section 12

Ecological information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

12.1 Toxicity

ALIPHATIC POLYISOCYANATE

| | |
|---------------------------------|---|
| LC50 - for Fish | > 100 mg/l/96 h |
| EC50 - for Crustacea | > 100 mg/l/48 h (Daphnia magna) |
| EC50 - for Algae/Aquatic Plants | > 100 mg/l/72 h (Desmodesmus subspicatus) |

| | |
|---------------------------------------|------------------------------------|
| Chronic NOEC for Algae/Aquatic Plants | 100 mg/l (Desmodesmus subspicatus) |
|---------------------------------------|------------------------------------|

HEXAMETHYLENE-DI-ISOCYANATE

| | |
|---------------------------------|--|
| LC50 - for Fish | 22 mg/l/96 h (Brachydanio rerio) |
| EC50 - for Algae/Aquatic Plants | > 77.4 mg/l/72 h (Desmodesmus subspicatus) |

| | |
|---------------------------------------|-------------------------------------|
| Chronic NOEC for Algae/Aquatic Plants | 11.7 mg/l (Desmodesmus subspicatus) |
|---------------------------------------|-------------------------------------|

12.2 Persistence and degradability

- ALIPHATIC POLYISOCYANATE
NOT rapidly degradable.
- HEXAMETHYLENE-DI-ISOCYANATE
NOT rapidly degradable.

12.3 Bioaccumulative potential

- HEXAMETHYLENE-DI-ISOCYANATE
Partition coefficient: n-octanol/water: 3.2
BCF: 3.2

12.4 Mobility in soil

Information not available.

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 Endocrine disrupting properties

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

12.7 Other adverse effects

Information not available.

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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.

Contaminated packaging:

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

Section 14 Transport information

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

14.1 UN number or ID number

Not applicable.

14.2 UN proper shipping name

Not applicable.

14.3 Transport hazard class(es)

Not applicable.

14.4 Packing group

Not applicable.

14.5 Environmental hazards

Not applicable.

14.6 Special precautions for user

Not applicable.

14.7 Maritime transport in bulk according to IMO instruments

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/EU:

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
 - Point: 74 DIISOCYANATES

Regulation (EU) 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.

Substances subject to exportation reporting pursuant to Regulation (EU) 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 not been performed for the preparation/for the substances indicated in section 3.

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Section 16

Other information

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

| | |
|---------------|--|
| Acute Tox. 1 | Acute toxicity, Category 1 |
| Acute Tox. 4 | Acute toxicity, Category 4 |
| Eye Irrit. 2 | Eye irritation, Category 2 |
| Skin Irrit. 2 | Skin irritation, Category 2 |
| STOT SE 3 | Specific target organ toxicity - single exposure, Category 3 |
| Resp. Sens. 1 | Respiratory sensitization, Category 1 |
| Skin Sens. 1 | Skin sensitization, Category 1 |
| H330 | Fatal if inhaled |
| H302 | Harmful if swallowed |
| H332 | Harmful if inhaled |
| H319 | Causes serious eye irritation |
| H315 | Causes skin irritation |
| H335 | May cause respiratory irritation |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled |
| H317 | May cause an allergic skin reaction |
| EUH204 | Contains isocyanates May produce an allergic reaction |

Legend:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50 % effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labelling 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: 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: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile Organic Compounds
- vPvB: Very Persistent and Very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German)

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General bibliography:

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2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
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16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
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21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)

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- 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:
01 / 02 / 03 / 04 / 05 / 08 / 09 / 10 / 11 / 12 / 15 / 16.