

# VOLTECO S.P.A

## GB20 - AKTI-SEAL 201

Revision nr.1  
Dated 22/06/2026  
First compilation  
Printed on 22/06/2026  
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EN

### Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878

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

##### 1.1. Product identifier

Code: GB20  
Product name: AKTI-SEAL 201  
UFI : W6K2-J34W-QE8D-CNY2

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

Intended use: Single-component sealant product that hardens in contact with air and humidity. Once hardened, the product is elastic. Upon contact with water its volume slowly increases.

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

Name: VOLTECO S.P.A  
Full address: via delle industrie 47  
District and Country: 31050 Ponzano Veneto (TV) Italia  
Tel.: 04229663  
e-mail address of the competent person responsible for the Safety Data Sheet: volteco@volteco.it

##### 1.4. Emergency telephone number

For urgent inquiries refer to:  
European emergency phone number 112  
Volteco - +39-0422-9663  
Ireland  
Poison information centre: 01 809 2166 (Daily 8am-10pm) In case of emergency call 999 or 112  
Malta  
In case of emergency call: +356 2395 2000 (24h)

#### 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:                              |      |                                                                            |
| Respiratory sensitization, category 1                              | H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| 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:



Signal word: Danger

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### SECTION 2. Hazards identification ... / >>

Hazard statements:

|               |                                                                            |
|---------------|----------------------------------------------------------------------------|
| <b>H334</b>   | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| <b>H412</b>   | Harmful to aquatic life with long lasting effects.                         |
| <b>EUH204</b> | Contains isocyanates. May produce an allergic reaction.                    |

Precautionary statements:

|                  |                                                                             |
|------------------|-----------------------------------------------------------------------------|
| <b>P261</b>      | Avoid breathing dust / fume / gas / mist / vapours / spray.                 |
| <b>P342+P311</b> | If experiencing respiratory symptoms: Call a POISON CENTER / doctor / . . . |
| <b>P304+P340</b> | IF INHALED: Remove person to fresh air and keep comfortable for breathing.  |
| <b>P284</b>      | Wear respiratory protection.                                                |
| <b>P501</b>      | Dispose of the product / container in accordance with current legislation.  |
| <b>P273</b>      | Avoid release to the environment.                                           |

**Contains:** DIPHENYLMETHANE-4,4'-DIISOCYANATE

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%.

### SECTION 3. Composition/information on ingredients

#### 3.2. Mixtures

Contains:

| Identification                                           | x = Conc. %            | Classification (EC) 1272/2008 (CLP)                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>HYDROCARBONS, C10-12, ISOALKANES, &lt;2% AROMATIC</b> |                        |                                                                                                                                                                                                                                                                                                                                                     |
| INDEX                                                    | $5 \leq x < 9$         | Flam. Liq. 3 H226, Asp. Tox. 1 H304, Aquatic Chronic 2 H411                                                                                                                                                                                                                                                                                         |
| EC                                                       | 923-037-2              |                                                                                                                                                                                                                                                                                                                                                     |
| CAS                                                      |                        |                                                                                                                                                                                                                                                                                                                                                     |
| <b>propylene carbonate</b>                               |                        |                                                                                                                                                                                                                                                                                                                                                     |
| INDEX                                                    | $4,6 \leq x < 4,8$     | Eye Irrit. 2 H319                                                                                                                                                                                                                                                                                                                                   |
| EC                                                       | 203-572-1              |                                                                                                                                                                                                                                                                                                                                                     |
| CAS                                                      | 108-32-7               |                                                                                                                                                                                                                                                                                                                                                     |
| <b>DIPHENYLMETHANE-4,4'-DIISOCYANATE</b>                 |                        |                                                                                                                                                                                                                                                                                                                                                     |
| INDEX                                                    | $0,809 \leq x < 0,909$ | Carc. 2 H351, Acute Tox. 4 H332, STOT RE 2 H373, 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, C Skin Irrit. 2 H315: $\geq 5\%$ , Eye Irrit. 2 H319: $\geq 5\%$ , Resp. Sens. 1 H334: $\geq 0,1\%$ , STOT SE 3 H335: $\geq 5\%$ |
| EC                                                       | 202-966-0              | ATE Inhalation mists/powders: 1,5 mg/l                                                                                                                                                                                                                                                                                                              |
| CAS                                                      | 101-68-8               |                                                                                                                                                                                                                                                                                                                                                     |
| REACH Reg.                                               | 01-2119457014-47-XXXX  |                                                                                                                                                                                                                                                                                                                                                     |

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

### SECTION 4. First aid measures

#### 4.1. Description of first aid measures

In case of doubt or in the presence of symptoms contact a doctor and show him this document.

In case of more severe symptoms, ask for immediate medical aid.

**EYES:** Remove, if present, contact lenses if the situation allows you to do so easily. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. Get medical advice/attention.

**SKIN:** Take off contaminated clothing. Wash immediately and thoroughly with running water (and soap if possible). Get medical advice. Avoid further contact with contaminated clothing.

**INGESTION:** Do not induce vomiting unless explicitly authorised by a doctor. Do not give anything by mouth to an unconscious person. Get medical advice/attention.

**INHALATION:** Remove victim to fresh air, away from the accident scene. In the event of respiratory symptoms (coughing, wheezing, breathing difficulty, asthma) keep the victim in a comfortable position for breathing. If necessary administer oxygen. If the subject stops

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### SECTION 4. First aid measures ... / >>

breathing, administer artificial respiration. Get medical advice/attention.

#### Rescuer protection

It is good practice for rescuers lending support to a person who has been exposed to a chemical substance or to a mixture to wear personal protective equipment. The nature of such protection depends on the hazard level of the substance or mixture, on the type of exposure and on the extent of the contamination. In the absence of other more specific indications, use of disposable gloves in the event of possible contact with body fluids is recommended. For the type of PPE suitable for the characteristics of the substance or mixture, see section 8.

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

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

DELAYED EFFECTS: Based on the information currently available, there are no known cases of delayed effects following exposure to this product.

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

If experiencing respiratory symptoms: Call a POISON CENTER / doctor / . . .

#### Means to have available in the workplace for specific and immediate treatment

Running water for skin and eye wash.

### 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

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |             |                                                                                                                                                                                                                                                                                            |    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| VOLTECO S.P.A                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             | Revision nr.1<br>Dated 22/06/2026<br>First compilation<br>Printed on 22/06/2026<br>Page n. 4 / 14                                                                                                                                                                                          | EN |
| GB20 - AKTI-SEAL 201                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |                                                                                                                                                                                                                                                                                            |    |
| 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                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |                                                                                                                                                                                                                                                                                            |    |
| Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat. Avoid leakage of the product into the environment. |             |                                                                                                                                                                                                                                                                                            |    |
| 7.2. Conditions for safe storage, including any incompatibilities                                                                                                                                                                                                                                                                                                                                                                                                                         |             |                                                                                                                                                                                                                                                                                            |    |
| Store only in the original container. Store in a cool and well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |                                                                                                                                                                                                                                                                                            |    |
| Regulatory references:                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |             |                                                                                                                                                                                                                                                                                            |    |
| DEU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Deutschland | WirkungDosisNOAELMAK-und BAT-Werte-Liste 2024 Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe                                                                                                                                                                   |    |
| ESP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | España      | Límites de exposición profesional para agentes químicos en España 2024                                                                                                                                                                                                                     |    |
| FRA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | France      | Valeurs limites d'exposition professionnelle aux agents chimiques en FranceDécret n° 2021-1849 du 28 décembre 2021                                                                                                                                                                         |    |
| POL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Polska      | ROZPORZĄDZENIE MINISTRA RODZINY, PRACY I POLITYKI SPOŁECZNEJ z dnia 24 czerwca 2024 r. zmieniające rozporządzenie w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy                                                               |    |
| ROU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | România     | HOTĂRÂRE nr. 179 din 28 februarie 2024 pentru modificarea și completarea Hotărârii Guvernului nr. 1.093/2006 privind stabilirea cerințelor minime de securitate și sănătate pentru protecția lucrătorilor împotriva riscurilor legate de expunerea la agenți ca                            |    |
| RUS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Россия      | ПОСТАНОВЛЕНИЕ от 13 февраля 2018 г. N 25 ОБ УТВЕРЖДЕНИИ ГИГИЕНИЧЕСКИХ НОРМАТИВОВ ГН 2.2.5.3532-18 "ПРЕДЕЛЬНО ДОПУСТИМЫЕ КОНЦЕНТРАЦИИ (ПДК) ВРЕДНЫХ ВЕЩЕСТВ В ВОЗДУХЕ РАБОЧЕЙ ЗОНЫ"                                                                                                         |    |
| SVK                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Slovensko   | 121_2024 Z. z. Nariadenie vlády o ochrane zdravia zamestnancov pred rizikami súvisiacimi s expozíciou karcinogénnym, mutagénnym alebo reprodukčne toxickým faktorom pri práci                                                                                                              |    |
| SVN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Slovenija   | Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti rakotvornim, mutagenim ali reprotoksičnim snovem pri delu. Ljubljana, četrtek 4. 4. 2024                                                                                                                              |    |
| EU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | OEL EU      | Directive (EU) 2022/431; 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. |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ACGIH       | ACGIH 2025                                                                                                                                                                                                                                                                                 |    |

EPY 12.1.0 - SDS 1004.1

## propylene carbonate

|                                                     |     |       |
|-----------------------------------------------------|-----|-------|
| Normal value in fresh water                         | 900 | µg/L  |
| Normal value in marine water                        | 90  | µg/L  |
| Normal value for fresh water sediment               | NEA |       |
| Normal value for marine water sediment              | NEA |       |
| Normal value for water, intermittent release        | 900 | µg/L  |
| Normal value for marine water, intermittent release | 9   | mg/l  |
| Normal value of STP microorganisms                  | 7,4 | g/l   |
| Normal value for the terrestrial compartment        | 810 | µg/kg |
| Normal value for the atmosphere                     | NPI |       |

| Route of exposure | Effects on consumers |                |               |                  | Effects on workers |                |               |                  |
|-------------------|----------------------|----------------|---------------|------------------|--------------------|----------------|---------------|------------------|
|                   | Acute local          | Acute systemic | Chronic local | Chronic systemic | Acute local        | Acute systemic | Chronic local | Chronic systemic |
| Oral              |                      | NPI            |               | 10,0 mg/kg       |                    |                |               |                  |
| Inhalation        |                      | NPI            | 10,0 mg/m³    | 17,4 mg/m³       | NPI                | NPI            | 20,0 mg/m³    | 70,53 mg/m³      |
| Skin              |                      | NPI            | NPI           | 10,0 mg/kg       | NPI                | NPI            | 10,0 mg/cm²   | 20,0 mg/kg       |

| Type      | Country | TWA/8h<br>mg/m3 | ppm   | STEL/15min<br>mg/m3 | ppm   | Remarks / Observations |
|-----------|---------|-----------------|-------|---------------------|-------|------------------------|
| AGW       | DEU     | 0,05            |       | 0,05                |       | INHAL 11               |
| AGW       | DEU     | 0,05            |       | 0,05                |       | SKIN 11                |
| MAK       | DEU     | 0,05            |       | 0,05 (C)            |       | INHAL C = 0,1 mg/m3    |
| MAK       | DEU     | 0,05            |       | 0,05                |       | SKIN C = 0,1 mg/m3     |
| VLA       | ESP     | 0,052           | 0,005 |                     |       |                        |
| VLEP      | FRA     | 0,1             | 0,01  | 0,2                 | 0,02  |                        |
| NDS/NDSch | POL     | 0,03            |       | 0,09                |       |                        |
| TLV       | ROU     |                 |       | 0,15                |       |                        |
| ПДК       | RUS     |                 |       | 0,5                 |       | n + a, A               |
| NPEL      | SVK     | 0,03            | 0,002 |                     |       |                        |
| MV        | SVN     | 0,05            |       | 0,05                |       | INHAL                  |
| MV        | SVN     |                 | 0,005 |                     | 0,005 | SKIN                   |
| OEL       | EU      | 0,01            |       | 0,02                |       | SKIN As NCO            |
| ACGIH     |         | 0,051           | 0,005 |                     |       |                        |

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.

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

## 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                       |                                                                        |
| Colour                                 | yellowish                   |                                                                        |
| Odour                                  | characteristic of solvent   |                                                                        |
| Melting point / freezing point         | not available               | Reason for missing data:La determinazione non è possibile tecnicamente |
| Initial boiling point                  | not available               | Reason for missing data:La determinazione non è possibile tecnicamente |
| Flammability                           | not flammable               |                                                                        |
| Lower explosive limit                  | not determined              |                                                                        |
| Upper explosive limit                  | not determined              |                                                                        |
| Flash point                            | > 100 °C                    |                                                                        |
| Auto-ignition temperature              | not available               |                                                                        |
| Decomposition temperature              | not available               |                                                                        |
| pH                                     | not available               |                                                                        |
| Kinematic viscosity                    | > 20,5 mm <sup>2</sup> /s   | Temperature: 40 °C                                                     |
| Solubility                             | not available               |                                                                        |
| Partition coefficient: n-octanol/water | not available               |                                                                        |
| Vapour pressure                        | not available               |                                                                        |
| Density and/or relative density        | 1,35-1,45 g/cm <sup>3</sup> |                                                                        |
| Relative vapour density                | not applicable              |                                                                        |
| 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 (Directive 2010/15/EU) 7,00 % - 98,00 g/litro

## SECTION 10. Stability and reactivity

## 10.1. Reactivity

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

## DIPHENYLMETHANE-4,4'-DIISOCYANATE

Decomposes at 274°C/525°F.

With water it develops carbon dioxide and forms an insoluble solid polymer and consequently any wet material recovered must be stored in open containers.

## 10.2. Chemical stability

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

## 10.3. Possibility of hazardous reactions

The vapours may also form explosive mixtures with the air.

## DIPHENYLMETHANE-4,4'-DIISOCYANATE

May react dangerously with: alcohols, amines, ammonia, sodium hydroxide, acids, water, strong acids, strong bases.

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

## 10.4. Conditions to avoid

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

## 10.5. Incompatible materials

CALCIUM CARBONATE

Incompatible with: acids,aluminium,magnesium.

## 10.6. Hazardous decomposition products

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

CALCIUM CARBONATE

In decomposition develops: calcium oxides.

DIPHENYLMETHANE-4,4'-DIISOCYANATE

May develop: nitric oxide,carbon oxides,hydrogen cyanide.

## 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

DIPHENYLMETHANE-4,4'-DIISOCYANATE

WORKERS: inhalation; contact with the skin.

POPULATION: inhalation of ambient air; contact with the skin of products containing the substance.

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

DIPHENYLMETHANE-4,4'-DIISOCYANATE

Causes symptoms of irritation of the eye mucous membranes, upper respiratory and digestive tract and also to the skin; lung irritation of the bronchitis type (chest pains, cough, asthmatic wheezing), neurological symptoms (dizziness, balance disorders, headaches and consciousness disturbances). In severe cases, may give rise to delayed pulmonary edema (INRS, 2009). May cause hypersensitivity pneumonia which, in the event of continuous exposure, may progress to interstitial fibrosis (INRS, 2009).

Interactive effects

DIPHENYLMETHANE-4,4'-DIISOCYANATE

Cross sensitisations with other isocyanates are possible, in particular with TDI (toluene diisocyanate).

## 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)

CALCIUM CARBONATE

LD50 (Dermal):

> 2000 mg/kg Rat - OCSE 403

LD50 (Oral):

> 2000 mg/kg Rat - OCSE 425

• Calcium carbonate does not present any acute toxicity.

• Inhalation: LC50 (4h) > 3 mg/l air (OECD 403, rat).

• Based on available data, the classification criteria are not met.

HYDROCARBONS, C10-12, ISOALKANES, <2% AROMATIC

LD50 (Dermal):

2200 mg/kg (rabbit)

LD50 (Oral):

5000 mg/kg (rat)

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

propylene carbonate

LD50 (Dermal): &gt; 2000 mg/kg (rabbit)

LD50 (Oral): &gt; 5000 mg/kg (rat)

DIPHENYLMETHANE-4,4'-DIISOCYANATE

LD50 (Dermal): &gt; 9400 mg/kg (Oryctolagus sp.)

LD50 (Oral): &gt; 2000 mg/kg (Rat)

LC50 (Inhalation mists/powders): 2,24 mg/l/1h (Rat)

SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

CALCIUM CARBONATE

- No irritation (OECD 404, rabbit).
- Based on available data, the classification criteria are not met.

SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

CALCIUM CARBONATE

- Calcium carbonate is not irritating to the eye (OECD 405, rabbit).
- Based on available data, the classification criteria are not met.

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the respiratory system

CALCIUM CARBONATE

- No sensitization (OECD 429, mouse).
- Based on available data, the classification criteria are not met.

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CALCIUM CARBONATE

- No mutagenicity (in vitro test results OECD 471, OECD 473 and OECD 476).
- Based on available data, the classification criteria are not met.

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

CALCIUM CARBONATE

- From genotoxicity tests and long-term studies on humans, it does not appear that calcium carbonate presents any risk of carcinogenicity.
- Based on available data, the classification criteria are not met.

DIPHENYLMETHANE-4,4'-DIISOCYANATE

Classified in Group 3 (not classifiable as a human carcinogen) by the International Agency for Research on Cancer (IARC) - (IARC, 1999).

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

CALCIUM CARBONATE

- Calcium carbonate poses no risk of reproductive toxicity.
- Based on available data, the classification criteria are not met.

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

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

## CALCIUM CARBONATE

- No organ toxicity observed in acute tests.
- Based on available data, the classification criteria are not met.

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

## CALCIUM CARBONATE

- No organ toxicity observed in repeated dose toxicity tests
- Oral NOAEL: 1000 mg/kg body weight/day (OECD 422, rat)  
Inhalation NOAEC: 0.212 mg/L (OECD 413, rat).  
Skin toxicity is not considered relevant.

Although skin contact during the production and use of calcium carbonate is possible, inhalation is considered to be the primary route of exposure. Calcium carbonate is an inorganic ionic solid and based on its physicochemical properties, the results of oral and dermatological acute toxicity studies, as well as the 28-day repeated dose oral toxicity study, calcium carbonate is not expected of calcium causes toxic effects following repeated exposure.

- Based on available data, the classification criteria for toxicity for prolonged exposure via inhalation, oral route or dermal route are not met.

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

## CALCIUM CARBONATE

- No hazards identified.

**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

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

**12.1. Toxicity**

## CALCIUM CARBONATE

EC50 - for Algae / Aquatic Plants > 14 mg/l/72h OCSE 201

Acute/prolonged toxicity to fish

LC50 (96h) for freshwater fish (rainbow trout *Oncorhynchus mykiss*): > 100% v/v saturated solution of test material - exceeds the maximum solubility level of the substance (OECD method 203).

Acute/prolonged toxicity to aquatic invertebrates

EC50 (48h) for aquatic invertebrates (*Daphnia magna*): > 100% v/v saturated solution of test material - exceeds the maximum solubility level of the substance (OECD method 202).

Acute/prolonged toxicity to aquatic plants

EC50/EC20/EC10 or NOEC (72h) for freshwater algae (*Desmodesmus subspicatus*): > 14 mg/L (OECD 201 method).

Toxicity to microorganisms, e.g. bacteria

EC50 (3h) activated sludge: > 1000 mg/L (OECD 209 method).

NOEC (3h) activated sludge: 1000 mg/L (OECD 209 method).

Chronic toxicity to aquatic organisms

Not applicable

Toxicity to soil organisms

EC50 (14 days) for soil macroorganisms (*Eisenia fetida* earthworms): > 1000 mg/kg (OECD 207 method).

NOEC (14 days) for soil macroorganisms (*Eisenia fetida* earthworms): 1000 mg/kg (OECD 207 method.)

EC50 (28 days) for soil microorganisms: >1000 mg/kg (OECD Method 216).

NOEC (28 days) for soil microorganisms: 1000 mg/kg (OECD 216 method).

Calcium carbonate is not toxic to soil organisms

Toxicity to terrestrial plants

EC50 (21 days) glycine max (soya), *lycopersicon esculentum* (tomato), *avena sativa* (oats): > 1000 mg/kg (OECD 208 method) NOEC (21 days) glycine max (soya), *lycopersicon esculentum* (tomato), *avena sativa* (oats): 1000 mg/kg (OECD 208 method).

Calcium carbonate is not acutely toxic to plants.

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

## HYDROCARBONS, C10-12, ISOALKANES, &lt;2% AROMATIC

|                                   |              |
|-----------------------------------|--------------|
| EC50 - for Algae / Aquatic Plants | 100 mg/l/72h |
| Chronic NOEC for Crustacea        | 11 µg/L      |

## propylene carbonate

|                                         |              |
|-----------------------------------------|--------------|
| LC50 - for Fish                         | 1 g/l/96h    |
| EC50 - for Crustacea                    | 1 g/l/48h    |
| EC50 - for Algae / Aquatic Plants       | 900 mg/l/72h |
| EC10 for Algae / Aquatic Plants         | 900 mg/l/72h |
| Chronic NOEC for Algae / Aquatic Plants | 900 mg/l     |

## DIPHENYLMETHANE-4,4'-DIISOCYANATE

|                                         |                                     |
|-----------------------------------------|-------------------------------------|
| LC50 - for Fish                         | > 1000 mg/l/96h (Danio rerio)       |
| EC50 - for Algae / Aquatic Plants       | > 1640 mg/l/72h                     |
| Chronic NOEC for Crustacea              | > 10 mg/l (Daphnia magna)           |
| Chronic NOEC for Algae / Aquatic Plants | 1640 mg/l (Desmodesmus subspicatus) |

## 12.2. Persistence and degradability

## CALCIUM CARBONATE

Water solubility: 0.1 - 100 mg/l

Habitic degradation:

- The substance is inorganic for which it is not subject to abiotic degradation.

Biodegradation:

- The substance is inorganic for which it does not undergo biodegradation.

## HYDROCARBONS, C10-12, ISOALKANES, &lt;2% AROMATIC

|                     |         |
|---------------------|---------|
| Solubility in water | 30 µg/L |
|---------------------|---------|

## propylene carbonate

Rapidly degradable

## DIPHENYLMETHANE-4,4'-DIISOCYANATE

|                        |                |
|------------------------|----------------|
| Solubility in water    | 0,1 - 100 mg/l |
| NOT rapidly degradable |                |

## 12.3. Bioaccumulative potential

## CALCIUM CARBONATE

- No bioaccumulation phenomena are expected.

## propylene carbonate

Not bioaccumulative

## DIPHENYLMETHANE-4,4'-DIISOCYANATE

|                                        |      |
|----------------------------------------|------|
| Partition coefficient: n-octanol/water | 4,51 |
|----------------------------------------|------|

## 12.4. Mobility in soil

## CALCIUM CARBONATE

- Not applicable.

## propylene carbonate

|                                   |      |
|-----------------------------------|------|
| Partition coefficient: soil/water | 6,41 |
| Very mobile                       |      |

## 12.5. Results of PBT and vPvB assessment

## CALCIUM CARBONATE

- This substance does not meet the criteria for classification as PBT or vPvB.

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

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### SECTION 12. Ecological information ... / >>

#### 12.6. Endocrine disrupting properties

##### CALCIUM CARBONATE

- The available data for the substance have been examined according to the criteria established in the Regulations ((EC) No. 1907/2006, (EU) 2017/2100, (EU) 2018/605) and found not to be applicable

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

##### CALCIUM CARBONATE

- The substance is not classified as dangerous for the environment according to the criteria of the European classification and labeling system.

### 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.

The management of waste arising from the use or dispersal of this product must be organised in accordance with occupational safety regulations. See section 8 for possible need for PPE.

##### 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

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## SECTION 15. Regulatory information ... / &gt;&gt;

|                            |        |                                   |
|----------------------------|--------|-----------------------------------|
| Point                      | 3 - 40 |                                   |
| <u>Contained substance</u> |        |                                   |
| Point                      | 75     |                                   |
| Point                      | 56     | DIPHENYLMETHANE-4,4'-DIISOCYANATE |
|                            |        | REACH Reg.: 01-2119457014-47-XXXX |
| 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.

## SECTION 16. Other information

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

|                          |                                                                            |
|--------------------------|----------------------------------------------------------------------------|
| <b>Flam. Liq. 3</b>      | Flammable liquid, category 3                                               |
| <b>Carc. 2</b>           | Carcinogenicity, category 2                                                |
| <b>Acute Tox. 4</b>      | Acute toxicity, category 4                                                 |
| <b>Asp. Tox. 1</b>       | Aspiration hazard, category 1                                              |
| <b>STOT RE 2</b>         | Specific target organ toxicity - repeated exposure, category 2             |
| <b>Eye Irrit. 2</b>      | Eye irritation, category 2                                                 |
| <b>Skin Irrit. 2</b>     | Skin irritation, category 2                                                |
| <b>STOT SE 3</b>         | Specific target organ toxicity - single exposure, category 3               |
| <b>Resp. Sens. 1</b>     | Respiratory sensitization, category 1                                      |
| <b>Skin Sens. 1</b>      | Skin sensitization, category 1                                             |
| <b>Aquatic Chronic 2</b> | Hazardous to the aquatic environment, chronic toxicity, category 2         |
| <b>Aquatic Chronic 3</b> | Hazardous to the aquatic environment, chronic toxicity, category 3         |
| <b>H226</b>              | Flammable liquid and vapour.                                               |
| <b>H351</b>              | Suspected of causing cancer.                                               |
| <b>H332</b>              | Harmful if inhaled.                                                        |
| <b>H304</b>              | May be fatal if swallowed and enters airways.                              |
| <b>H373</b>              | May cause damage to organs through prolonged or repeated exposure.         |
| <b>H319</b>              | Causes serious eye irritation.                                             |
| <b>H315</b>              | Causes skin irritation.                                                    |
| <b>H335</b>              | May cause respiratory irritation.                                          |
| <b>H334</b>              | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| <b>H317</b>              | May cause an allergic skin reaction.                                       |
| <b>H411</b>              | Toxic to aquatic life with long lasting effects.                           |
| <b>H412</b>              | Harmful to aquatic life with long lasting effects.                         |
| <b>EUH204</b>            | Contains isocyanates. May produce an allergic reaction.                    |

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road

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## SECTION 16. Other information ... / &gt;&gt;

- 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 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: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent, bioaccumulative and toxic
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PMT: Persistent, mobile and toxic
- 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
- vPvM: Very persistent and very mobile
- 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) 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 (VIII 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)
  22. Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)
  23. Delegated Regulation (UE) 2023/707
  24. Delegated Regulation (UE) 2023/1434 (XIX Atp. CLP)
  25. Delegated Regulation (UE) 2023/1435 (XX Atp. CLP)
  26. Delegated Regulation (UE) 2024/197 (XXI Atp. CLP)
  27. Delegated Regulation (UE) 2024/2564 (XXII Atp. CLP)
  28. Regulation (EU) 2024/2865
- 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

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## SECTION 16. Other information ... / &gt;&gt;

- 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.