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SECTION 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name

Silicate resin TYPE W012 comp. B Express

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

<u>Use</u>

Silicate resin

Uses advised against

No information

1.3. Details of the supplier of the safety data sheet

Supplier

SANIKOM D.O.O. Address: Vrtna ulica 39, 4294 Križe, Slovenia Tel.: 051-354-081 Fax: 0599-50-636 e-mail: gregor.janc@sanikom.si Point of contact for safety info: Gregor Janc

1.4. Emergency telephone number

Emergency

112

Supplier

051-354-081

SECTION 2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

2.1.1. Classification according to directive 67/548/EEC or. 99/45/EC

Xn; R20/22 Harmful by inhalation and if swallowed.
Xi; R36/37/38 Irritating to eyes, respiratory system and skin.
Carc. Cat. 3; R40 Limited evidence of a carcinogenic effect.
Xn; R42/43 May cause sensitisation by inhalation and skin contact.
Xn; R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

2.2. Label elements

2.2.1. Symbol letter(s):



2.2.2. Risk phrases:

R20/22 Harmful by inhalation and if swallowed.
R36/37/38 Irritating to eyes, respiratory system and skin.
R40 Limited evidence of a carcinogenic effect.
R42/43 May cause sensitisation by inhalation and skin contact.
R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.



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2.2.3. Safety phrases:

S23 Do not breathe vapour/spray.S36/37 Wear suitable protective clothing and gloves.S4 Keep away from living quarters.S46 If swallowed, seek medical advice immediately and show this container or label.

2.2.4. Contains:

Polymer MDI triisobutyl phosphate 4,4'-Methylenediphenyl diisocyanate, oligomeric reaction products with α-hydro-ω-hydroxypoly(oxy-1,2-ethanediyl)

2.2.5. Special provisions

Preparations containing isocyanates Contains isocyanates. See information supplied by the manufacturer.

MDI notice

Persons already sensitised to diisocyanates may develop allergic reactions when using this product. Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.

2.3. Other hazards

No information

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

For mixtures see 3.2.

3.2. Mixtures

| Chemical name | CAS EC Index | % | Classification according to Regulation (EC) No 1272/2008 [CLP] | Classification according to directive 67/548/EEC or 99/45/EC | REACH reg. number |
|---|------------------------------|------|---|---|-------------------------|
| Polymer MDI | 9016-87-9 202-966-0 - | > 60 | Skin Irrit. 2; H315 Skin Sens. 1; H317 Eye Irrit. 2; H319 Acute Tox. 4; H332 Resp. Sens. 1; H334 STOT SE 3; H335 | Carc. Cat. 3; R40 Xn; R20-42/43-48/20 Xi; R36/37/38 | - |
| tris(2-chloro-1-methylethyl) phosphate | 13674-84-5 237-158-7 - | > 10 | Acute Tox. 4; H302 | Xn; R22 | - |
| triisobutyl phosphate | 126-71-6 204-798-3 - | < 10 | Skin Sens. 1; H317 | Xi; R43 | - |
| 4,4'-Methylenediphenyl diisocyanate, oligomeric reaction products with α -hydro- ω -hydroxypoly(oxy-1,2-ethanediyl) | 9048-57-1 500-028-8 - | < 10 | Skin Irrit. 2; H315 Skin Sens. 1; H317 Eye Irrit. 2; H319 Acute Tox. 4; H332 Resp. Sens. 1; H334 STOT SE 3; H335 Carc. 2; H351 STOT RE 2; H373 | Carc. Cat. 3; R40 Xn; R20-42/43-48/20 Xi; R36/37/38 | - |

SECTION 4. FIRST AID MEASURES

4.1. Description of first aid measures

General measures

Never give anything by mouth to an unconscious person.

Inhalation

Remove patient to fresh air-move out of dangerous area. If symptoms occur it is necessary to search for medical help.

Skin contact

Immediately remove contaminated clothing. If symptoms persist seek medical attention. Wash thoroughly with plenty of water and soap!

Eye contact

Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. If irritation does not stop, seek professional medical treatment!

Ingestion

Do not induce vomiting. Rinse mouth with water. Consult a physician. Show the physician the Safety Data Sheet or label.

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

Inhalation

Coughing, sneezing, nasal discharge, labored breathing. Can cause sensitization.

Skin contact

Irritating to the skin. May cause sensitisation by skin contact.

Eye contact

Redness, tearing, pain.

Ingestion

Irritates mucous membranes in the mouth, throat, esophagus and in gastrointestinal area.

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

SECTION 5. FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide. Dry chemical powder. Water spray. Alcohol resistant foam.

Unsuitable extinguishing media

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products

5.3. Advice for firefighters

Protective actions

In case of fire do not breathe fumes/gases.

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Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective clothing for fire-fighters (including helmets, protective boots and gloves) (EN 469) and self-contained breathing apparatus (SCBA) with a full face-piece (EN 137).

SECTION 6. ACCIDENTAL RELEASE MEASURES

- 6.1. Personal precautions, protective equipment and emergency procedures
 - 6.1.1. For non-emergency personnel

Protective equipment

Use personal protective equipment (Section 8).

Emergency procedures

Ensure adequate ventilation.

6.1.2. For emergency responders

6.2. Environmental precautions

Do not allow product to reach water/drains/sewage systems or permeable soil. If accidental entry into water or ground occurs, inform responsible authorities.

6.3. Methods and material for containment and cleaning up

6.3.1. For containment

6.3.2. For cleaning up

Absorb product (with inert material), collect it in special container and dispose it according to valid regulations on handling with waste. Apply neutralizing agent (sodium carbonate).

6.3.3. Other information

6.4. Reference to other sections

See also sections 8 and 13.

SECTION 7. HANDLING AND STORAGE

7.1. Precautions for safe handling

7.1.1. Protective measures

Measures to prevent fire

Ensure adequate ventilation.

Measures to prevent aerosol and dust generation

Measures to protect the environment

7.1.2. Advice on general occupational hygiene

Use good personal hygiene practices-wash hands at breaks and when done working with material. Do not eat, drink or smoke while working. Avoid contact with skin and eyes. Do not breathe vapours/mist.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1. Technical measures and storage conditions

Keep in cool and well ventilated area. Keep unauthorized personnel away. Keep away from food, drink and animal feedingstuffs Keep away from moisture.

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7.2.2. Packaging materials

HDPE (high density polyethylene) Low density polyethylene (LDPE).

7.2.3. Requirements for storage rooms and vessels

7.2.4. Storage class

7.2.5. Further information on storage conditions

7.3. Specific end use(s)

Recommendations

Industrial sector specific solutions

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

8.1.1. Occupational Exposure limit values

No information

8.1.2. Information on monitoring procedures

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

8.1.3. DNEL values

No information

8.1.4. PNEC values

No information

8.2. Exposure controls

8.2.1. Appropriate engineering control

Substance/mixture related measures to prevent exposure during identified uses

Use good personal hygiene practices-wash hands at breaks and when done working with material.

Technical measures to prevent exposure

Provide good ventilation and local exhaust in the area with increased concentration.

8.2.2. Personal protective equipment

Eye and face protection

Safety glasses with side protection. (EN 166)

Hand protection

Protective gloves (EN 374).

Appropriate materials

| Material | Thickness | Penetration Time | Remark |
|--------------------|-----------|------------------|--------|
| Butyl | 0,7 mm | 480 min | |
| Nitrile | 0,4 mm | 480 min | |
| chloroprene rubber | 0,5 mm | 480 min | |

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Skin protection

Cotton protective clothing (EN ISO 13688) and shoes that cover the entire foot (EN ISO 20345).

Respiratory protection

In case of insufficient ventilation wear mask with filter ABEK (EN 14387).

Thermal hazards

8.2.3. Environmental exposure controls

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

| - | Physical state: | liquid |
|---|-----------------|--------|
| - | Colour: | brown |
| - | Odour: | |

Important health, safety and environmental information

| - | рН | No information |
|---|---|--|
| - | Melting point | No information |
| - | Boiling point/boiling range | No information |
| - | Flashpoint | > 200 °C (DIN 51 758) |
| - | Evaporation rate | No information |
| - | Ignition temperature | > 400 °C (DIN 51 794) |
| - | Explosion limits (vol%) | No information |
| - | Vapour pressure | No information |
| - | Vapour density | No information |
| - | Density | Density: ca. 1,2 g/cm ³ at 25 °C |
| - | Solubility | No information |
| - | Partition coefficient n-octanol/water (log Kow) | No information |
| - | Auto-ignition temperature | No information |
| - | Decomposition temperature | No information |
| - | Viscosity | dynamic : 160 – 220 mPas at 25 °C |
| - | Explosive properties | No information |
| - | Oxidising properties | No information |

9.2. Other information

Remarks:

SECTION 10. STABILITY AND REACTIVITY

10.1. Reactivity

10.2. Chemical stability

Product is stable under normal conditions according to handling and storage.

10.3. Possibility of hazardous reactions

10.4. Conditions to avoid

Do not store above 900°C.

- 10.5. Incompatible materials
 - Alcohols. Amines. Water. Acids. Bases.

10.6. Hazardous decomposition products

Slowly reacts with water and spreads carbon oxides, which can increase pressure in closed containers.

SECTION 11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

11.1.1. Acute toxicity

For components

| Chemical name | exp. route | Туре | species | Time | value | Method | Remark |
|----------------------------------|------------|------------------|---------|------|-------------|--------|--------------|
| Polymer MDI (9016-87-9) | oral | LD_{50} | rat | | 10000 mg/kg | | |
| Polymer MDI (9016-87-9) | inhalation | LC_{50} | rabbit | 4 h | 0,49 mg/l | | dust/aerosol |
| Polymer MDI (9016-87-9) | dermal | LD_{50} | rat | | 9400 mg/kg | | |
| triisobutyl phosphate (126-71-6) | oral | LD_{50} | rat | | 4180 mg/kg | | |
| triisobutyl phosphate (126-71-6) | inhalation | LC ₅₀ | rat | 4 h | 5,14 mg/l | | vapour |

11.1.2. Skin corrosion/irritation, serious eye damage/irritation, aspiration hazard

No information

11.1.3. Respiratory or skin sensitisation

For components

| Chemical name | exp. route | species | Time | result | Method | Remark |
|---|---------------|---------|------|--|--------|--------|
| Polymer MDI (9016-87-9) | dermal | | | May cause sensitisation by skin contact. | | |
| Polymer MDI (9016-87-9) | inhalation | | | May cause sensitisation by inhalation. | | |
| 4,4'-Methylenediphenyl diisocyanate, oligomeric reaction products with α -hydro- ω -hydroxypoly(oxy-1,2-ethanediyl) (9048-57-1) | dermal | | | May cause sensitisation by skin contact. | | |
| 4,4'-Methylenediphenyl diisocyanate, oligomeric reaction products with α -hydro- ω -hydroxypoly(oxy-1,2-ethanediyl) (9048-57-1) | inhalation | | | May cause sensitisation by inhalation. | | |

11.1.4. Carcinogenicity, Mutagenicity, Reproductive toxicity

Carcinogenicity

No information

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(Germ cell) mutagenicity No information

Reproductive toxicity

No information

Summary of evaluation of the CMR properties

Suspected of causing cancer.

11.1.5. STOT-single and repeated exposure

No information

SECTION 12. ECOLOGICAL INFORMATION

12.1. Toxicity

12.1.1. Acute (short-term) toxicity

For components

| Substance (CAS Nr.) | Туре | Value | Exposure time | Species | Organism | Method | Remark |
|----------------------------------|-----------|--------------|---------------|------------------|---------------------|--------|--------|
| Polymer MDI (9016-87-9) | EC_{50} | 1000 mg/L | 24 h | crustacea | | | |
| | EC_{50} | 1640 mg/L | 72 h | algae | | | |
| | EC_{50} | 100 mg/L | 3 h | activated sludge | | | |
| triisobutyl phosphate (126-71-6) | LC_{50} | 0,1 – 1 mg/L | 96 h | fish | | | |
| | EC_{50} | 0,1 - 1 mg/L | 48 h | daphnia | | | |
| | EC_{50} | 0,1 - 1 mg/L | 72 h | algae | | | |
| | LC_{50} | 33 mg/L | 96 h | fish | Pimephales promelas | | |
| | EC_{50} | 69,6 mg/L | 48 h | daphnia | Daphnia magna | | |

12.1.2. Chronic (long-term) toxicity

For components

| Substance (CAS Nr.) | Туре | Value | Exposure time | Species | Organism | Method | Remark |
|-------------------------|------|---------|---------------|----------------------|----------|--------|--------|
| Polymer MDI (9016-87-9) | NOEC | 10 mg/l | 21 days | aquatic invertebrate | | | |

12.2. Persistence and degradability

12.2.1. Abiotic degradation, physical- and photo-chemical elimination

No information

12.2.2. Biodegradation

No information

12.3. Bioaccumulative potential

12.3.1. Partition coefficient n-octanol/water (log Kow)

No information

12.3.2. Bioconcentration factor (BCF)

No information

12.4. Mobility in soil

12.4.1. Known or predicted distribution to environmental compartments

No information

12.4.2. Surface tension

No information

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12.4.3. Adsorption/Desorption

No information

12.5. Results of PBT and vPvB assessment

No evaluation.

12.6. Other adverse effects

No information

12.7. Additional information

For product

Do not allow to enter ground water, water course or sewage system.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

13.1.1. Product / Packaging disposal

Waste chemical

Disposal must be made according to official regulations: to leave it to authorized collector/remover/transformer of hazardous waste.

- Waste codes / waste designations according to LoW

08 05 01* - waste isocyanates

Packaging

Completely emptied container dispose according to regulations.

- 13.1.2. Waste treatment-relevant information
- 13.1.3. Sewage disposal-relevant information
- 13.1.4. Other disposal recommendations

SECTION 14. TRANSPORT INFORMATION

14.1. UN number

not applicable

14.2. UN proper shipping name

Not dangerous according to transport regulations.

14.3. Transport hazard class(es)

not applicable

- 14.4. Packing group not applicable
- 14.5. Environmental hazards

NO

14.6. Special precautions for user not applicable

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14.7. Transport in bulk according to Annex II of Marpol and the IBC Code not applicable

SECTION 15. REGULATORY INFORMATION

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
 - Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
 - Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
 - Dangerous preparations directive (99/45/EC) as amended
 - Dangerous substances directive (67/548/EEC) as amended

15.1.1. Information according 1999/13/EC about limitation of emissions of volatile organic compounds

(VOC-guideline)

not applicable

15.2. Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16. OTHER INFORMATION

Indication of changes

Key literature references and sources for data

List of relevant R phrases

R20 Harmful by inhalation.

R22 Harmful if swallowed.

R36/37/38 Irritating to eyes, respiratory system and skin.

R40 Limited evidence of a carcinogenic effect.

R42/43 May cause sensitisation by inhalation and skin contact.

R43 May cause sensitisation by skin contact.

R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

List of relevant H phrases

- H302 Harmful if swallowed.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

- H351 Suspected of causing cancer .
- H373 May cause damage to organs through prolonged or repeated exposure .

The information of this SDS is based on the present state of our knowledge and meets the requirements of EU and national laws. The user's working conditions however, are beyond our knowledge and control. The product is not to be used for purposes other than those specified under section 1 without a written permission. It remains the responsibility of the user to ensure that the necessary steps are taken to meet the laws and regulations. Handling of the product may only be done by people above 18 years of age, who are satisfactorily informed of how to do the work, the hazardous properties and necessary safety precautions. The information given in this SDS is to describe the product only in terms of health and safety requirements and should not, therefore, be construed as guaranteeing specific properties.

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