



Dual Cure Resin Cement Base with Fluoride

Safety Data Sheet

according to Regulation (EC) No. 453/2010

Revision date: 01/05/2015 Date of issue: 01/05/2015

Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture

Product Name : Dual Cure Resin Cement Base with Fluoride

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

1.2.1. Relevant identified uses

Use of the substance/mixture : For professional dental use only.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Septodont, Inc.

416 S. Taylor Ave.

Louisville, CO 80027

T 303-665-7535

email: usregulatoryaffairs@septodont.com

www.septodontusa.com

1.4. Emergency telephone number

Emergency number : 800-424-9300 CHEMTREC; 1-703-527-3887 CHEMTREC - Outside USA

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute Tox. 4 (Oral) H302

Acute Tox. 4 (Inhalation:vapour) H332

Skin Irrit. 2 H315

Eye Irrit. 2 H319

Skin Sens. 1 H317

Repr. 1B H360

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

R43

Xn; R20/22

Xi; R36/38

Repr.Cat.2; R60

Repr.Cat.2; R61

R32

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



Signal word (CLP) : Danger

Hazardous ingredients : 1-Propanamine, Boron oxide (B₂O₃), Barium, Hydrogen chloride, 2-Propenoic acid, 2-methyl-, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester, Triethylene glycol dimethacrylate, Ethanol,

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| | |
|--------------------------------|--|
| | 2,2'-[(4-methylphenyl)imino]bis-, N,N-Dimethylaminoethyl methacrylate, Sodium fluoride |
| Hazard statements (CLP) | : H302+H332 - Harmful if swallowed or if inhaled H315 - Causes skin irritation H317 - May cause an allergic skin reaction H319 - Causes serious eye irritation H360 - May damage fertility or the unborn child |
| Precautionary statements (CLP) | : P201 - Obtain special instructions before use P202 - Do not handle until all safety precautions have been read and understood P261 - Avoid breathing vapors, mist, or spray P264 - Wash hands, forearms, and other exposed areas thoroughly after handling P270 - Do not eat, drink or smoke when using this product P271 - Use only outdoors or in a well-ventilated area P272 - Contaminated work clothing should not be allowed out of the workplace P280 - Wear eye protection, protective clothing, protective gloves P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell P302+P352 - IF ON SKIN: Wash with plenty of water P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P308+P313 - If exposed or concerned: Get medical advice/attention P312 - Call a POISON CENTER or doctor if you feel unwell P321 - Specific treatment (see Section 4 on this SDS) P330 - Rinse mouth P333+P313 - If skin irritation or rash occurs: Get medical advice/attention P337+P313 - If eye irritation persists: Get medical advice/attention P362+P364 - Take off contaminated clothing and wash it before reuse P405 - Store locked up P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations |
| EUH phrases | : EUH032 - Contact with acids liberates very toxic gas |

2.3. Other Hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

| Name | Product identifier | % | Classification according to Directive 67/548/EEC |
|---|--|-------------|--|
| Silica, vitreous | (CAS No) 60676-86-0 (EC no) 262-373-8;424-440-1 | 23,5 - 41,2 | Not classified |
| 2-Propenoic acid, 2-methyl-, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester | (CAS No) 1565-94-2 (EC no) 216-367-7 | 14 - 23,34 | Xi; R36/38 R43 |
| Barium | (CAS No) 7440-39-3 (EC no) 231-149-1 | 12,15 - 22 | Xi; R36/37/38 T; R25 |

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| Name | Product identifier | % | Classification according to Directive 67/548/EEC |
|--|---|-------------------------------|---|
| Poly(oxy-1,2-ethanediyl), .alpha.,.alpha.'-[(1-methylethylidene)di-4,1-phenylene]bis[.omega.-[(2-methyl-1-oxo-2-propenyl)oxy]- | (CAS No) 41637-38-1 (EC no) 609-946-4 | 10,5 - 18 | R53 |
| 2-Propenoic acid, 2-methyl-, 1,6-hexanediyl ester | (CAS No) 6606-59-3 (EC no) 229-551-7 | 3,5 - 9 | Xi; R36/38 |
| Boron oxide (B2O3) substance listed as REACH Candidate (Diboron trioxide) | (CAS No) 1303-86-2 (EC no) 215-125-8 (EC index no) 005-008-00-8 | 2,025 - 5,5 | Repr.Cat.1; R60 Repr.Cat.1; R61 |
| Aluminum oxide | (CAS No) 1344-28-1 (EC no) 215-691-6 | 2,025 - 5,5 | Not classified |
| Triethylene glycol dimethacrylate | (CAS No) 109-16-0 (EC no) 203-652-6 | 1,75 - 5,34 | R43 |
| Sodium fluoride | (CAS No) 7681-49-4 (EC no) 231-667-8 (EC index no) 009-004-00-7 | 1 - 5 | T; R25 R32 Xi; R36/38 |
| Hydrogen chloride | (CAS No) 7647-01-0 | 1,5 - 4,4 | T; R23 C; R35 |
| 1-Propanamine | (CAS No) 107-10-8 (EC no) 203-462-3 | 0,45 - 2,75 | T; R23/24 Xn; R22 F; R11 C; R34 Xi; R41 Xi; R37 |
| Ethanol, 2,2'-[(4-methylphenyl)imino]bis- | (CAS No) 3077-12-1 (EC no) 221-359-1 | 0,35 - 2,25 | Xn; R20/21/22 Xi; R36/38 R43 |
| N,N-Dimethylaminoethyl methacrylate | (CAS No) 2867-47-2 (EC no) 220-688-8 (EC index no) 607-132-00-3 | 0,35 - 2,25 | Xn; R21/22 Xi; R36/38 R43 |
| Name | Product identifier | Specific concentration limits | |
| Boron oxide (B2O3) | (CAS No) 1303-86-2 (EC no) 215-125-8 (EC index no) 005-008-00-8 | (C >= 3,1) R60-R61 | |
| N,N-Dimethylaminoethyl methacrylate | (CAS No) 2867-47-2 (EC no) 220-688-8 (EC index no) 607-132-00-3 | (C >= 10) Xi; R36/38 | |
| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
| Silica, vitreous | (CAS No) 60676-86-0 (EC no) 262-373-8; 424-440-1 | 23,5 - 41,2 | Not classified |
| 2-Propenoic acid, 2-methyl-, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester | (CAS No) 1565-94-2 (EC no) 216-367-7 | 14 - 23,34 | Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 |

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| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|--|---|-------------|---|
| Barium | (CAS No) 7440-39-3 (EC no) 231-149-1 | 12,15 - 22 | Water-react. 2, H261 Acute Tox. 3 (Oral), H301 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 |
| Poly(oxy-1,2-ethanediyl), .alpha.,.alpha.'-[(1-methylethylidene)di-4,1-phenylene]bis[.omega.-[(2-methyl-1-oxo-2-propenyl)oxy]- | (CAS No) 41637-38-1 (EC no) 609-946-4 | 10,5 - 18 | Aquatic Chronic 4, H413 |
| 2-Propenoic acid, 2-methyl-, 1,6-hexanediyl ester | (CAS No) 6606-59-3 (EC no) 229-551-7 | 3,5 - 9 | Skin Irrit. 2, H315 Eye Irrit. 2, H319 |
| Boron oxide (B2O3) substance listed as REACH Candidate (Diboron trioxide) | (CAS No) 1303-86-2 (EC no) 215-125-8 (EC index no) 005-008-00-8 | 2,025 - 5,5 | Repr. 1B, H360FD |
| Aluminum oxide | (CAS No) 1344-28-1 (EC no) 215-691-6 | 2,025 - 5,5 | Not classified |
| Triethylene glycol dimethacrylate | (CAS No) 109-16-0 (EC no) 203-652-6 | 1,75 - 5,34 | Skin Sens. 1, H317 |
| Sodium fluoride | (CAS No) 7681-49-4 (EC no) 231-667-8 (EC index no) 009-004-00-7 | 1 - 5 | Acute Tox. 3 (Oral), H301 Skin Irrit. 2, H315 Eye Irrit. 2, H319 |
| Hydrogen chloride | (CAS No) 7647-01-0 | 1,5 - 4,4 | Acute Tox. 3 (Inhalation:gas), H331 Skin Corr. 1A, H314 |
| 1-Propanamine | (CAS No) 107-10-8 (EC no) 203-462-3 | 0,45 - 2,75 | Flam. Liq. 2, H225 Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:vapour), H331 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 |
| Ethanol, 2,2'-[(4-methylphenyl)imino]bis- | (CAS No) 3077-12-1 (EC no) 221-359-1 | 0,35 - 2,25 | Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 |

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| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|-------------------------------------|---|-------------------------------|---|
| N,N-Dimethylaminoethyl methacrylate | (CAS No) 2867-47-2 (EC no) 220-688-8 (EC index no) 607-132-00-3 | 0,35 - 2,25 | Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 |
| Name | Product identifier | Specific concentration limits | |
| Boron oxide (B2O3) | (CAS No) 1303-86-2 (EC no) 215-125-8 (EC index no) 005-008-00-8 | (C >= 3,1) Repr. 1B, H360FD | |

Full text of R- and H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Not expected to present a significant inhalation hazard under anticipated conditions of normal use.
- First-aid measures after skin contact : Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Wash contaminated clothing before reuse. Seek medical attention if ill effect or irritation develops.
- First-aid measures after eye contact : Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

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

- Symptoms/injuries : Harmful if inhaled. Harmful if swallowed. Causes skin irritation. Causes serious eye irritation.
- Symptoms/injuries after inhalation : Harmful if inhaled.
- Symptoms/injuries after skin contact : May cause an allergic skin reaction.
- Symptoms/injuries after eye contact : None expected under normal conditions of use.
- Symptoms/injuries after ingestion : Harmful if swallowed.
- Chronic symptoms : Exposure may produce an allergic reaction. May damage fertility or the unborn child.

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

If exposed or concerned, get medical advice and attention.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.
- Unsuitable extinguishing media : Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Not considered flammable but may burn at high temperatures.
- Explosion hazard : Product is not explosive.
- Reactivity : No reactivity hazard.

5.3. Advice for firefighters

- Precautionary measures fire : Exercise caution when fighting any chemical fire.

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- Firefighting instructions : Use water spray or fog for cooling exposed containers.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.
- Other information : Refer to Section 9 for flammability properties.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Avoid all contact with skin, eyes, or clothing.

6.1.1. For non-emergency personnel

- Protective equipment : Use appropriate personal protection equipment (PPE).
- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

6.2. Environmental precautions

- Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

- For containment : Absorb and/or contain spill with inert material, then place in suitable container.
- Methods for cleaning up : Clean up spills immediately and dispose of waste safely.

6.4. Reference to other sections

See Section 8, Exposure Controls and Personal Protection. See Section 13, Disposal Considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a dry, cool and well-ventilated place. Keep container closed when not in use.
- Incompatible products : Strong acids. Strong bases. Strong oxidizers.

7.3. Specific end use(s)

For professional dental use only.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| Hydrogen chloride (7647-01-0) | | |
|-------------------------------|--|--|
| Croatia | GVI (granična vrijednost izloženosti) (mg/m ³) | 8 mg/m ³ |
| Croatia | GVI (granična vrijednost izloženosti) (ppm) | 5 ppm |
| Croatia | KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m ³) | 15 mg/m ³ |
| Croatia | KGVI (kratkotrajna granična vrijednost izloženosti) (ppm) | 10 ppm |
| USA ACGIH | ACGIH Ceiling (ppm) | 2 ppm |
| Portugal | OEL TWA (mg/m ³) | 8 mg/m ³ (indicative limit value) |
| Portugal | OEL TWA (ppm) | 5 ppm (indicative limit value) |

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| | | |
|---------------------------------------|--|--|
| Hydrogen chloride (7647-01-0) | | |
| Portugal | OEL STEL (mg/m ³) | 15 mg/m ³ (indicative limit value) |
| Portugal | OEL STEL (ppm) | 10 ppm (indicative limit value) |
| Silica, vitreous (60676-86-0) | | |
| Austria | MAK (mg/m ³) | 0,3 mg/m ³ (respirable fraction) |
| Belgium | Limit value (mg/m ³) | 0,1 mg/m ³ (alveolar dust) |
| Bulgaria | OEL TWA (mg/m ³) | 0,07 mg/m ³ (respirable fraction) |
| Croatia | GVI (granična vrijednost izloženosti) (mg/m ³) | 0,08 mg/m ³ (respirable dust) |
| Germany | TRGS 900 Occupational exposure limit value (mg/m ³) | 0,3 mg/m ³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed-respirable fraction) |
| Switzerland | VME (mg/m ³) | 0,3 mg/m ³ (respirable) |
| United Kingdom | WEL TWA (mg/m ³) | 0,08 mg/m ³ (respirable dust) |
| United Kingdom | WEL STEL (mg/m ³) | 0,24 mg/m ³ (calculated-respirable dust) |
| Denmark | Grænseværdie (langvarig) (mg/m ³) | 0,1 mg/m ³ (respirable) |
| Ireland | OEL (8 hours ref) (mg/m ³) | 0,08 mg/m ³ (respirable dust) |
| Ireland | OEL (15 min ref) (mg/m ³) | 0,24 mg/m ³ (calculated-respirable dust) |
| Poland | NDS (mg/m ³) | 2,0 mg/m ³ (inhalable fraction) 1,0 mg/m ³ (respirable fraction) |
| Slovenia | OEL TWA (mg/m ³) | 0,3 mg/m ³ (respirable fraction) |
| 1-Propanamine (107-10-8) | | |
| Bulgaria | OEL TWA (mg/m ³) | 10,0 mg/m ³ |
| Latvia | OEL TWA (mg/m ³) | 5 mg/m ³ |
| Finland | HTP-arvo (15 min) | 12 mg/m ³ |
| Finland | HTP-arvo (15 min) (ppm) | 5 ppm |
| Lithuania | IPRV (mg/m ³) | 5 mg/m ³ |
| Romania | OEL TWA (mg/m ³) | 0,50 mg/m ³ |
| Romania | OEL TWA (ppm) | 0,2 ppm |
| Romania | OEL STEL (mg/m ³) | 0,80 mg/m ³ |
| Romania | OEL STEL (ppm) | 0,3 ppm |
| Boron oxide (B2O3) (1303-86-2) | | |
| Austria | MAK (mg/m ³) | 15 mg/m ³ (inhalable fraction) |
| Austria | MAK Short time value (mg/m ³) | 75 mg/m ³ (inhalable fraction) |
| Belgium | Limit value (mg/m ³) | 10 mg/m ³ |
| Bulgaria | OEL TWA (mg/m ³) | 5,0 mg/m ³ |
| Croatia | GVI (granična vrijednost izloženosti) (mg/m ³) | 10 mg/m ³ |
| Croatia | KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m ³) | 20 mg/m ³ |
| France | VME (mg/m ³) | 10 mg/m ³ |
| Greece | OEL TWA (mg/m ³) | 15 mg/m ³ |
| USA ACGIH | ACGIH TWA (mg/m ³) | 10 mg/m ³ |
| Latvia | OEL TWA (mg/m ³) | 5 mg/m ³ |

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| Boron oxide (B2O3) (1303-86-2) | | |
|---------------------------------------|--|---|
| Spain | VLA-ED (mg/m ³) | 10 mg/m ³ |
| Switzerland | VME (mg/m ³) | 10 mg/m ³ (inhalable) |
| United Kingdom | WEL TWA (mg/m ³) | 10 mg/m ³ |
| United Kingdom | WEL STEL (mg/m ³) | 20 mg/m ³ |
| Denmark | Grænseværdie (langvarig) (mg/m ³) | 10 mg/m ³ |
| Ireland | OEL (8 hours ref) (mg/m ³) | 10 mg/m ³ |
| Ireland | OEL (15 min ref) (mg/m ³) | 20 mg/m ³ |
| Norway | Gjennomsnittsverdier (AN) (mg/m ³) | 10 mg/m ³ (equal to the standard for nuisance dust) |
| Norway | Gjennomsnittsverdier (Korttidsverdi) (mg/m ³) | 20 mg/m ³ (equal to the standard for nuisance dust) |
| Poland | NDS (mg/m ³) | 10 mg/m ³ (inhalable fraction) |
| Romania | OEL TWA (mg/m ³) | 10 mg/m ³ |
| Romania | OEL STEL (mg/m ³) | 15 mg/m ³ |
| Portugal | OEL TWA (mg/m ³) | 10 mg/m ³ |
| Aluminum oxide (1344-28-1) | | |
| Austria | MAK (mg/m ³) | 5 mg/m ³ (alveolar dust, respirable fraction, smoke) |
| Austria | MAK Short time value (mg/m ³) | 10 mg/m ³ (alveolar dust, respirable fraction, smoke) |
| Belgium | Limit value (mg/m ³) | 1 mg/m ³ |
| Croatia | GVI (granična vrijednost izloženosti) (mg/m ³) | 10 mg/m ³ (total dust) 4 mg/m ³ (respirable dust) |
| France | VME (mg/m ³) | 10 mg/m ³ |
| Greece | OEL TWA (mg/m ³) | 10 mg/m ³ (inhalable fraction) 5 mg/m ³ (respirable fraction) |
| Latvia | OEL TWA (mg/m ³) | 6 mg/m ³ (aerosol disintegration) |
| Spain | VLA-ED (mg/m ³) | 10 mg/m ³ |
| Switzerland | VLE (mg/m ³) | 24 mg/m ³ (respirable, smoke) |
| Switzerland | VME (mg/m ³) | 3 mg/m ³ (respirable, smoke) |
| United Kingdom | WEL TWA (mg/m ³) | 10 mg/m ³ inhalable dust 4 mg/m ³ respirable dust |
| Denmark | Grænseværdie (langvarig) (mg/m ³) | 5 mg/m ³ (total) 2 mg/m ³ (respirable) |
| Hungary | AK-érték | 6 mg/m ³ (respirable dust) |
| Lithuania | IPRV (mg/m ³) | 5 mg/m ³ (inhalable fraction) 2 mg/m ³ (respirable fraction) |
| Norway | Gjennomsnittsverdier (AN) (mg/m ³) | 10 mg/m ³ (equal to the standard for nuisance dust) |
| Norway | Gjennomsnittsverdier (Korttidsverdi) (mg/m ³) | 20 mg/m ³ (equal to the standard for nuisance dust) |
| Poland | NDS (mg/m ³) | 2,5 mg/m ³ (inhalable fraction) 1,2 mg/m ³ (respirable fraction) |
| Romania | OEL TWA (mg/m ³) | 2 mg/m ³ (aerosol) |
| Romania | OEL TWA (ppm) | 0,5 ppm (aerosol) |

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| Aluminum oxide (1344-28-1) | | |
|------------------------------------|--|---|
| Romania | OEL STEL (mg/m ³) | 5 mg/m ³ (aerosol) 10 mg/m ³ (dust) 3 mg/m ³ (fume) |
| Romania | OEL STEL (ppm) | 1,2 ppm (aerosol) |
| Slovakia | NPHV (priemerná) (mg/m ³) | 1,5 mg/m ³ (fume) 1,5 mg/m ³ 0,1 mg/m ³ (regulated under .gamma.- Aluminum oxide-respirable fraction) |
| Sweden | nivågränsvärde (NVG) (mg/m ³) | 5 mg/m ³ (total dust) 2 mg/m ³ (respirable dust) |
| Portugal | OEL TWA (mg/m ³) | 10 mg/m ³ (particulate matter containing no Asbestos and < 1% Crystalline silica) |
| Portugal | OEL chemical category (PT) | A4 - Not Classifiable as a Human Carcinogen |
| Barium (7440-39-3) | | |
| Austria | MAK (mg/m ³) | 0,5 mg/m ³ (inhalable fraction) |
| Austria | MAK Short time value (mg/m ³) | 2 mg/m ³ (inhalable fraction) |
| Belgium | Limit value (mg/m ³) | 0,5 mg/m ³ |
| Gibraltar | OEL TWA (mg/m ³) | 0,5 mg/m ³ |
| USA ACGIH | ACGIH TWA (mg/m ³) | 0,5 mg/m ³ |
| Spain | VLA-ED (mg/m ³) | 0,5 mg/m ³ (indicative limit value) |
| Netherlands | Grenswaarde TGG 8H (mg/m ³) | 0,5 mg/m ³ |
| Denmark | Grænseværdie (langvarig) (mg/m ³) | 0,5 mg/m ³ |
| Finland | HTP-arvo (8h) (mg/m ³) | 0,5 mg/m ³ |
| Malta | OEL TWA (mg/m ³) | 0,5 mg/m ³ |
| Norway | Gjennomsnittsverdier (AN) (mg/m ³) | 0,5 mg/m ³ |
| Norway | Gjennomsnittsverdier (Korttidsverdi) (mg/m ³) | 1,5 mg/m ³ |
| Poland | NDS (mg/m ³) | 0,5 mg/m ³ |
| Romania | OEL TWA (mg/m ³) | 0,5 mg/m ³ |
| Slovenia | OEL TWA (mg/m ³) | 0,5 mg/m ³ |
| Portugal | OEL TWA (mg/m ³) | 0,5 mg/m ³ (indicative limit value) |
| Portugal | OEL chemical category (PT) | A4 - Not Classifiable as a Human Carcinogen |
| Sodium fluoride (7681-49-4) | | |
| France | VME (mg/m ³) | 2 mg/m ³ |
| Latvia | OEL TWA (mg/m ³) | 0,2 mg/m ³ |

8.2. Exposure controls

Appropriate engineering controls

: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits.

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Personal protective equipment : Safety glasses. Gloves. Protective clothing. Insufficient ventilation: wear respiratory protection.



Hand protection : Wear chemically resistant protective gloves.

Eye protection : Chemical goggles or safety glasses.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

Other information : When using, do not eat, drink or smoke.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|---------------------|
| Physical state | : Liquid |
| Colour | : No data available |
| Odour | : No data available |
| Odour threshold | : No data available |
| pH | : 9,19 |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : No data available |
| Freezing point | : No data available |
| Boiling point | : No data available |
| Flash point | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : No data available |
| Vapour pressure | : No data available |
| Relative vapour density at 20 °C | : No data available |
| Relative Density | : No data available |
| Solubility | : No data available |
| Partition coefficient: n-octanol/water | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : Not applicable |

9.2. Other information

VOC content : < 1 %

SECTION 10: Stability and reactivity

10.1. Reactivity

No reactivity hazard.

10.2. Chemical stability

Product is stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

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10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizers.

10.6. Hazardous decomposition products

Hydrocarbons. Carbon oxides (CO, CO₂).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed. Inhalation:vapour: Harmful if inhaled.

| Dual Cure Resin Cement Base with Fluoride | |
|---|--------------------------------|
| ATE CLP (oral) | 339,337 mg/kg bodyweight |
| ATE CLP (vapours) | 15,066 mg/l/4h |
| Hydrogen chloride (7647-01-0) | |
| LD50 oral rat | 238 (238 - 277) mg/kg |
| LD50 dermal rabbit | > 5010 mg/kg |
| LC50 inhalation rat (mg/l) | 1,68 mg/l (Exposure time: 1 h) |
| ATE CLP (gases) | 700,000 ppmv/4h |
| ATE CLP (dust,mist) | 0,420 mg/l/4h |
| 1-Propanamine (107-10-8) | |
| LD50 oral rat | 370 mg/kg |
| LD50 dermal rabbit | 560 mg/kg |
| LC50 inhalation rat (ppm) | 2310 ppm/4h |
| ATE CLP (vapours) | 7,060 mg/l/4h |
| Aluminum oxide (1344-28-1) | |
| LD50 oral rat | > 15900 mg/kg |
| LC50 inhalation rat (mg/l) | > 2,3 mg/l/4h |
| Barium (7440-39-3) | |
| LD50 oral rat | 132 mg/kg |
| Ethanol, 2,2'-[(4-methylphenyl)imino]bis- (3077-12-1) | |
| ATE CLP (oral) | 500,000 mg/kg bodyweight |
| ATE CLP (dermal) | 1100,000 mg/kg bodyweight |
| ATE CLP (dust,mist) | 1,500 mg/l/4h |
| N,N-Dimethylaminoethyl methacrylate (2867-47-2) | |
| LD50 oral rat | 1550 mg/kg |
| LD50 dermal rabbit | > 3000 mg/kg |
| LC50 inhalation rat (mg/l) | 0,62 mg/l/4h |
| ATE CLP (dermal) | 1100,000 mg/kg bodyweight |
| Sodium fluoride (7681-49-4) | |
| LD50 oral rat | 52 mg/kg |

| | |
|-----------------------------------|--|
| Skin corrosion/irritation | : Causes skin irritation. pH: 9,19 |
| Serious eye damage/irritation | : Causes serious eye irritation. pH: 9,19 |
| Respiratory or skin sensitisation | : May cause an allergic skin reaction. |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : May damage fertility or the unborn child. |

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Specific target organ toxicity (single exposure) : Not classified.

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

| 1-Propanamine (107-10-8) | |
|---|--|
| LC50 fishes 1 | 296 - 320 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through]) |
| Boron oxide (B2O3) (1303-86-2) | |
| EC50 Daphnia 1 | 370 - 490 mg/l (Exposure time: 48 h - Species: Daphnia magna) |
| Aluminum oxide (1344-28-1) | |
| LC50 fishes 1 | 14,6 mg/l |
| EC50 Daphnia 1 | 38,2 mg/l |
| NOEC (acute) | > 50 mg/l |
| N,N-Dimethylaminoethyl methacrylate (2867-47-2) | |
| EC50 Daphnia 1 | 53 mg/l (Exposure time: 48 h - Species: Daphnia magna) |
| Sodium fluoride (7681-49-4) | |
| LC50 fishes 1 | > 530 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus) |
| EC50 Daphnia 1 | 338 mg/l (Exposure time: 48 h - Species: Daphnia magna) |
| LC50 fish 2 | 830 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [semi-static]) |
| EC50 Daphnia 2 | 98 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static]) |

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

| 1-Propanamine (107-10-8) | |
|--------------------------|------|
| Log Pow | 0,48 |

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

| Boron oxide (B2O3) (1303-86-2) | |
|--|--|
| This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII | |
| This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII | |

12.6. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose of waste material in accordance with all local, regional, national, and international regulations.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

Not regulated for transport

14.2. UN proper shipping name

Not applicable

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14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

No additional information available

14.6.2. Transport by sea

No additional information available

14.6.3. Air transport

No additional information available

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

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

| | |
|---|--|
| 3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008 | Dual Cure Resin Cement Base with Fluoride |
| 3.b. Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10 | Triethylene glycol dimethacrylate |
| 3.c. Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1 | Poly(oxy-1,2-ethanediyl), .alpha.,.alpha.'-[(1-methylethylidene)di-4,1-phenylene]bis[.omega.-[(2-methyl-1-oxo-2-propenyl)oxy]- |
| 30. Substances which appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 classified as Toxic to Reproduction category 1A or 1B (Table 3.1) or Toxic to Reproduction category 1 or 2 (Table 3.2) and listed as follows: Reproductive toxicant category 1A adverse effects on sexual function and fertility or on development (Table 3.1) or Reproductive toxicant category 1 with R60 (May impair fertility) or R61 (May cause harm to the unborn child) (Table 3.2) listed in Appendix 5 Reproductive toxicant category 1B adverse effects on sexual function and fertility or on development (Table 3.1) or Reproductive toxicant category 2 with R60 (May impair fertility) or R61 (May cause harm to the unborn child) (Table 3.2) listed in Appendix 6 | Boron oxide (B2O3) |
| 40. Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not. | 1-Propanamine |

Contains substance on the REACH candidate list in concentration $\geq 0.1\%$ or with a lower specific limit: Diboron trioxide (EC 215-125-8, CAS 1303-86-2)

Contains no REACH Annex XIV substances

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VOC content : < 1 %

Other information, restriction and prohibition regulations : This substance is for use in medicinal products, and as such, is exempt from REACH registration requirements.

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Revision date : 01/05/2015

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

Full text of R-, H- and EUH-phrases

| | |
|-------------------------------------|--|
| Acute Tox. 3 (Dermal) | Acute toxicity (dermal), Category 3 |
| Acute Tox. 3 (Inhalation:gas) | Acute toxicity (inhalation:gas) Category 3 |
| Acute Tox. 3 (Inhalation:vapour) | Acute toxicity (inhalation:vapour) Category 3 |
| Acute Tox. 3 (Oral) | Acute toxicity (oral), Category 3 |
| Acute Tox. 4 (Dermal) | Acute toxicity (dermal), Category 4 |
| Acute Tox. 4 (Inhalation:dust,mist) | Acute toxicity (inhalation:dust,mist) Category 4 |
| Acute Tox. 4 (Inhalation:vapour) | Acute toxicity (inhalation:vapour) Category 4 |
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Aquatic Chronic 4 | Hazardous to the aquatic environment — Chronic Hazard, Category 4 |
| Eye Dam. 1 | Serious eye damage/eye irritation, Category 1 |
| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 |
| Flam. Liq. 2 | Flammable liquids, Category 2 |
| Met. Corr. 1 | Corrosive to metals, Category 1 |
| Repr. 1B | Reproductive toxicity, Category 1B |
| Repr. 1B | Reproductive toxicity, Category 1B |
| Skin Corr. 1A | Skin corrosion/irritation, Category 1A |
| Skin Corr. 1B | Skin corrosion/irritation, Category 1B |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| Skin Sens. 1 | Sensitisation — Skin, category 1 |
| STOT SE 3 | Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation |
| Water-react. 2 | Substances and Mixtures which, in contact with water, emit flammable gases, Category 2 |
| H225 | Highly flammable liquid and vapour |
| H261 | In contact with water releases flammable gases |
| H290 | May be corrosive to metals |
| H301 | Toxic if swallowed |
| H302 | Harmful if swallowed |
| H311 | Toxic in contact with skin |
| H312 | Harmful in contact with skin |
| H314 | Causes severe skin burns and eye damage |
| H315 | Causes skin irritation |
| H317 | May cause an allergic skin reaction |

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| | |
|-----------|--|
| H318 | Causes serious eye damage |
| H319 | Causes serious eye irritation |
| H331 | Toxic if inhaled |
| H332 | Harmful if inhaled |
| H335 | May cause respiratory irritation |
| H360 | May damage fertility or the unborn child |
| H360FD | May damage fertility. May damage the unborn child |
| H413 | May cause long lasting harmful effects to aquatic life |
| R11 | Highly flammable |
| R20/21/22 | Harmful by inhalation, in contact with skin and if swallowed |
| R20/22 | Harmful by inhalation and if swallowed |
| R21/22 | Harmful in contact with skin and if swallowed |
| R22 | Harmful if swallowed |
| R23 | Toxic by inhalation |
| R23/24 | Toxic by inhalation and in contact with skin |
| R25 | Toxic if swallowed |
| R32 | Contact with acids liberates very toxic gas |
| R34 | Causes burns |
| R35 | Causes severe burns |
| R36/37/38 | Irritating to eyes, respiratory system and skin |
| R36/38 | Irritating to eyes and skin |
| R37 | Irritating to respiratory system |
| R41 | Risk of serious damage to eyes |
| R43 | May cause sensitisation by skin contact |
| R53 | May cause long-term adverse effects in the aquatic environment |
| R60 | May impair fertility |
| R61 | May cause harm to the unborn child |
| C | Corrosive |
| F | Highly flammable |
| T | Toxic |
| Xi | Irritant |
| Xn | Harmful |

SDS EU (REACH Annex II) 11pt

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.



Dual Cure Resin Cement Catalyst

Safety Data Sheet

according to Regulation (EC) No. 453/2010

Revision date: 27/02/2015 Date of issue: 27/02/2015

Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture

Product Name : Dual Cure Resin Cement Catalyst

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

1.2.1. Relevant identified uses

Use of the substance/mixture : For professional dental use only.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Septodont, Inc.

416 S. Taylor Ave.

Louisville, CO 80027

T 303-665-7535

email: usregulatoryaffairs@septodont.com

www.septodontusa.com

1.4. Emergency telephone number

Emergency number : 800-424-9300 CHEMTREC; 1-703-527-3887 CHEMTREC - Outside USA

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute Tox. 4 (Oral) H302

Skin Irrit. 2 H315

Eye Irrit. 2 H319

Skin Sens. 1 H317

Repr. 1B H360

STOT SE 3 H335

Aquatic Chronic 3 H412

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

R43

R52/53

Xn; R22

Xi; R36/37/38

Repr.Cat.2; R60

Repr.Cat.2; R61

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS07

GHS08

Signal word (CLP) : Danger

Hazardous ingredients : Boron oxide (B₂O₃), Barium, Triethylene glycol dimethacrylate, 2-Propenoic acid, 2-methyl-, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-

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| | |
|--------------------------------|---|
| Hazard statements (CLP) | propanediyl)] ester, Dibenzoyl peroxide : H302 - Harmful if swallowed H315 - Causes skin irritation H317 - May cause an allergic skin reaction H319 - Causes serious eye irritation H335 - May cause respiratory irritation H360 - May damage fertility or the unborn child H412 - Harmful to aquatic life with long lasting effects |
| Precautionary statements (CLP) | : P201 - Obtain special instructions before use P202 - Do not handle until all safety precautions have been read and understood P261 - Avoid breathing dust, mist, spray, vapours P264 - Wash hands, forearms, and other exposed areas thoroughly after handling P270 - Do not eat, drink or smoke when using this product P271 - Use only outdoors or in a well-ventilated area P272 - Contaminated work clothing should not be allowed out of the workplace P273 - Avoid release to the environment P280 - Wear eye protection, protective clothing, protective gloves P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell P302+P352 - IF ON SKIN: Wash with plenty of water P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P308+P313 - If exposed or concerned: Get medical advice/attention P312 - Call a POISON CENTER or doctor if you feel unwell P330 - Rinse mouth P333+P313 - If skin irritation or rash occurs: Get medical advice/attention P337+P313 - If eye irritation persists: Get medical advice/attention P362+P364 - Take off contaminated clothing and wash it before reuse P403+P233 - Store in a well-ventilated place. Keep container tightly closed P405 - Store locked up P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations |

2.3. Other Hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

| Name | Product identifier | % | Classification according to Directive 67/548/EEC |
|---|--|------------|--|
| Silica, vitreous substance with national workplace exposure limit(s) (AT, BE, BG, DE, DK, GB, IE, PL) | (CAS No) 60676-86-0 (EC no) 262-373-8;424-440-1 | 29,4 - 42 | Not classified |
| Barium | (CAS No) 7440-39-3 (EC no) 231-149-1 | 17,64 - 28 | Xi; R36/37/38 T; R25 |

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| Name | Product identifier | % | Classification according to Directive 67/548/EEC |
|--|---|-------------------------------|---|
| Triethylene glycol dimethacrylate | (CAS No) 109-16-0 (EC no) 203-652-6 | 12 - 20 | R43 |
| Poly(oxy-1,2-ethanediyl), .alpha.,.alpha.'-[(1-methylethylidene)di-4,1-phenylene]bis[.omega.-[(2-methyl-1-oxo-2-propenyl)oxy]- | (CAS No) 41637-38-1 (EC no) 609-946-4 | 6 - 12 | R53 |
| 2-Propenoic acid, 2-methyl-, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester | (CAS No) 1565-94-2 (EC no) 216-367-7 | 6 - 12 | Xi; R36/38 R43 |
| Boron oxide (B2O3) substance listed as REACH Candidate (Diboron trioxide) | (CAS No) 1303-86-2 (EC no) 215-125-8 (EC index no) 005-008-00-8 | 2,94 - 7 | Repr.Cat.1; R60 Repr.Cat.1; R61 |
| Aluminum oxide substance with national workplace exposure limit(s) (AT, BE, DK, ES, ET, FR, GB, GR, HU, LT, LV, PL, PT, RO, SE, SK) | (CAS No) 1344-28-1 (EC no) 215-691-6 | 2,94 - 7 | Not classified |
| Dibenzoyl peroxide | (CAS No) 94-36-0 (EC no) 202-327-6 (EC index no) 617-008-00-0 | 0,3 - 2 | E; R3 Xi; R36 R43 O; R7 |
| 2,6-Di-tert-butyl-p-cresol | (CAS No) 128-37-0 (EC no) 204-881-4 | < 0,4 | N; R50/53 |
| Name | Product identifier | Specific concentration limits | |
| Boron oxide (B2O3) | (CAS No) 1303-86-2 (EC no) 215-125-8 (EC index no) 005-008-00-8 | (C >= 3,1) R60-R61 | |
| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
| Silica, vitreous substance with national workplace exposure limit(s) (AT, BE, BG, DE, DK, GB, IE, PL) | (CAS No) 60676-86-0 (EC no) 262-373-8;424-440-1 | 29,4 - 42 | Not classified |
| Barium | (CAS No) 7440-39-3 (EC no) 231-149-1 | 17,64 - 28 | Water-react. 2, H261 Acute Tox. 3 (Oral), H301 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 |
| Triethylene glycol dimethacrylate | (CAS No) 109-16-0 (EC no) 203-652-6 | 12 - 20 | Skin Sens. 1, H317 |
| Poly(oxy-1,2-ethanediyl), .alpha.,.alpha.'-[(1-methylethylidene)di-4,1-phenylene]bis[.omega.-[(2-methyl-1-oxo-2-propenyl)oxy]- | (CAS No) 41637-38-1 (EC no) 609-946-4 | 6 - 12 | Aquatic Chronic 4, H413 |
| 2-Propenoic acid, 2-methyl-, (1-methylethylidene)bis[4,1-phenyleneoxy(2-hydroxy-3,1-propanediyl)] ester | (CAS No) 1565-94-2 (EC no) 216-367-7 | 6 - 12 | Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 |

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| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|--|---|-------------------------------|--|
| Boron oxide (B ₂ O ₃) substance listed as REACH Candidate (Diboron trioxide) | (CAS No) 1303-86-2 (EC no) 215-125-8 (EC index no) 005-008-00-8 | 2,94 - 7 | Repr. 1B, H360FD |
| Aluminum oxide substance with national workplace exposure limit(s) (AT, BE, DK, ES, ET, FR, GB, GR, HU, LT, LV, PL, PT, RO, SE, SK) | (CAS No) 1344-28-1 (EC no) 215-691-6 | 2,94 - 7 | Not classified |
| Dibenzoyl peroxide | (CAS No) 94-36-0 (EC no) 202-327-6 (EC index no) 617-008-00-0 | 0,3 - 2 | Org. Perox. B, H241 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Acute 1, H400 |
| 2,6-Di-tert-butyl-p-cresol | (CAS No) 128-37-0 (EC no) 204-881-4 | < 0,4 | Aquatic Acute 1, H400 Aquatic Chronic 1, H410 |
| Name | Product identifier | Specific concentration limits | |
| Boron oxide (B ₂ O ₃) | (CAS No) 1303-86-2 (EC no) 215-125-8 (EC index no) 005-008-00-8 | (C >= 3,1) Repr. 1B, H360FD | |

Full text of R- and H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

| | |
|---------------------------------------|--|
| First-aid measures general | : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). |
| First-aid measures after inhalation | : Not expected to present a significant inhalation hazard under anticipated conditions of normal use. |
| First-aid measures after skin contact | : Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Wash contaminated clothing before reuse. Seek medical attention if ill effect or irritation develops. |
| First-aid measures after eye contact | : Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists. |
| First-aid measures after ingestion | : Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician. |

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

| | |
|--------------------------------------|--|
| Symptoms/injuries | : Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. |
| Symptoms/injuries after inhalation | : None expected under normal conditions of use. |
| Symptoms/injuries after skin contact | : May cause an allergic skin reaction. |
| Symptoms/injuries after eye contact | : None expected under normal conditions of use. |
| Symptoms/injuries after ingestion | : May be harmful if swallowed. |
| Chronic symptoms | : Exposure may produce an allergic reaction. May damage fertility or the unborn child. |

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

If exposed or concerned, get medical advice and attention.

SECTION 5: Firefighting measures

5.1. Extinguishing media

| | |
|------------------------------|---|
| Suitable extinguishing media | : Use extinguishing media appropriate for surrounding fire. |
|------------------------------|---|

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Unsuitable extinguishing media : Do not use a heavy water stream. Use of heavy stream of water may spread fire.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Not considered flammable but may burn at high temperatures.

Explosion hazard : Product is not explosive.

Reactivity : No reactivity hazard.

5.3. Advice for firefighters

Precautionary measures fire : Exercise caution when fighting any chemical fire.

Firefighting instructions : Use water spray or fog for cooling exposed containers.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

Other information : Refer to Section 9 for flammability properties.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Do not get in eyes, on skin, or on clothing.

6.1.1. For non-emergency personnel

Protective equipment : Use appropriate personal protection equipment (PPE).

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment : Absorb and/or contain spill with inert material, then place in suitable container.

Methods for cleaning up : Clear up spills immediately and dispose of waste safely.

6.4. Reference to other sections

See Section 8, Exposure Controls and Personal Protection. See Section 13, Disposal Considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a dry, cool and well-ventilated place. Keep container closed when not in use.

Incompatible products : Strong acids. Strong bases. Strong oxidizers.

7.3. Specific end use(s)

For professional dental use only.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| Silica, vitreous (60676-86-0) | | |
|-------------------------------|----------------------------------|--|
| Austria | MAK (mg/m ³) | 0,3 mg/m ³ (respirable fraction) |
| Belgium | Limit value (mg/m ³) | 0,1 mg/m ³ (alveolar dust) |
| Bulgaria | OEL TWA (mg/m ³) | 0,07 mg/m ³ (respirable fraction) |

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| Silica, vitreous (60676-86-0) | | |
|---------------------------------------|--|--|
| Croatia | GVI (granična vrijednost izloženosti) (mg/m ³) | 0,08 mg/m ³ (respirable dust) |
| Germany | TRGS 900 Occupational exposure limit value (mg/m ³) | 0,3 mg/m ³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed-respirable fraction) |
| United Kingdom | WEL TWA (mg/m ³) | 0,08 mg/m ³ (respirable dust) |
| United Kingdom | WEL STEL (mg/m ³) | 0,24 mg/m ³ (calculated-respirable dust) |
| Denmark | Grænseværdie (langvarig) (mg/m ³) | 0,1 mg/m ³ (respirable) |
| Ireland | OEL (8 hours ref) (mg/m ³) | 0,08 mg/m ³ (respirable dust) |
| Ireland | OEL (15 min ref) (mg/m ³) | 0,24 mg/m ³ (calculated-respirable dust) |
| Poland | NDS (mg/m ³) | 2,0 mg/m ³ (inhalable fraction) 1,0 mg/m ³ (respirable fraction) |
| Slovenia | OEL TWA (mg/m ³) | 0,3 mg/m ³ (respirable fraction) |
| Boron oxide (B2O3) (1303-86-2) | | |
| Austria | MAK (mg/m ³) | 15 mg/m ³ (inhalable fraction) |
| Austria | MAK Short time value (mg/m ³) | 75 mg/m ³ (inhalable fraction) |
| Belgium | Limit value (mg/m ³) | 10 mg/m ³ |
| Bulgaria | OEL TWA (mg/m ³) | 5,0 mg/m ³ |
| Croatia | GVI (granična vrijednost izloženosti) (mg/m ³) | 10 mg/m ³ |
| Croatia | KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m ³) | 20 mg/m ³ |
| France | VME (mg/m ³) | 10 mg/m ³ |
| USA ACGIH | ACGIH TWA (mg/m ³) | 10 mg/m ³ |
| Latvia | OEL TWA (mg/m ³) | 5 mg/m ³ |
| Spain | VLA-ED (mg/m ³) | 10 mg/m ³ |
| United Kingdom | WEL TWA (mg/m ³) | 10 mg/m ³ |
| United Kingdom | WEL STEL (mg/m ³) | 20 mg/m ³ |
| Denmark | Grænseværdie (langvarig) (mg/m ³) | 10 mg/m ³ |
| Ireland | OEL (8 hours ref) (mg/m ³) | 10 mg/m ³ |
| Ireland | OEL (15 min ref) (mg/m ³) | 20 mg/m ³ |
| Poland | NDS (mg/m ³) | 10 mg/m ³ (inhalable fraction) |
| Romania | OEL TWA (mg/m ³) | 10 mg/m ³ |
| Romania | OEL STEL (mg/m ³) | 15 mg/m ³ |
| Portugal | OEL TWA (mg/m ³) | 10 mg/m ³ |
| Aluminum oxide (1344-28-1) | | |
| Austria | MAK (mg/m ³) | 5 mg/m ³ (alveolar dust, respirable fraction, smoke) |
| Austria | MAK Short time value (mg/m ³) | 10 mg/m ³ (alveolar dust, respirable fraction, smoke) |
| Belgium | Limit value (mg/m ³) | 1 mg/m ³ |
| Croatia | GVI (granična vrijednost izloženosti) (mg/m ³) | 10 mg/m ³ (total dust) 4 mg/m ³ (respirable dust) |

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| Aluminum oxide (1344-28-1) | | |
|--|---|---|
| France | VME (mg/m ³) | 10 mg/m ³ |
| Latvia | OEL TWA (mg/m ³) | 6 mg/m ³ (aerosol disintegration) |
| Spain | VLA-ED (mg/m ³) | 10 mg/m ³ |
| United Kingdom | WEL TWA (mg/m ³) | 10 mg/m ³ inhalable dust 4 mg/m ³ respirable dust |
| Denmark | Grænseværdie (langvarig) (mg/m ³) | 5 mg/m ³ (total) 2 mg/m ³ (respirable) |
| Hungary | AK-érték | 6 mg/m ³ (respirable dust) |
| Lithuania | IPRV (mg/m ³) | 5 mg/m ³ (inhalable fraction) 2 mg/m ³ (respirable fraction) |
| Poland | NDS (mg/m ³) | 2,5 mg/m ³ (inhalable fraction) 1,2 mg/m ³ (respirable fraction) |
| Romania | OEL TWA (mg/m ³) | 2 mg/m ³ (aerosol) |
| Romania | OEL TWA (ppm) | 0,5 ppm (aerosol) |
| Romania | OEL STEL (mg/m ³) | 5 mg/m ³ (aerosol) 10 mg/m ³ (dust) 3 mg/m ³ (fume) |
| Romania | OEL STEL (ppm) | 1,2 ppm (aerosol) |
| Slovakia | NPHV (priemerná) (mg/m ³) | 1,5 mg/m ³ (fume) 1,5 mg/m ³ 0,1 mg/m ³ (regulated under .gamma.- Aluminum oxide-respirable fraction) |
| Sweden | nivågränsvärde (NVG) (mg/m ³) | 5 mg/m ³ (total dust) 2 mg/m ³ (respirable dust) |
| Portugal | OEL TWA (mg/m ³) | 10 mg/m ³ (particulate matter containing no Asbestos and < 1% Crystalline silica) |
| Portugal | OEL chemical category (PT) | A4 - Not Classifiable as a Human Carcinogen |
| Barium (7440-39-3) | | |
| Austria | MAK (mg/m ³) | 0,5 mg/m ³ (inhalable fraction) |
| Austria | MAK Short time value (mg/m ³) | 2 mg/m ³ (inhalable fraction) |
| Belgium | Limit value (mg/m ³) | 0,5 mg/m ³ |
| USA ACGIH | ACGIH TWA (mg/m ³) | 0,5 mg/m ³ |
| Spain | VLA-ED (mg/m ³) | 0,5 mg/m ³ (indicative limit value) |
| Netherlands | Grenswaarde TGG 8H (mg/m ³) | 0,5 mg/m ³ |
| Denmark | Grænseværdie (langvarig) (mg/m ³) | 0,5 mg/m ³ |
| Finland | HTP-arvo (8h) (mg/m ³) | 0,5 mg/m ³ |
| Malta | OEL TWA (mg/m ³) | 0,5 mg/m ³ |
| Poland | NDS (mg/m ³) | 0,5 mg/m ³ |
| Romania | OEL TWA (mg/m ³) | 0,5 mg/m ³ |
| Slovenia | OEL TWA (mg/m ³) | 0,5 mg/m ³ |
| Portugal | OEL TWA (mg/m ³) | 0,5 mg/m ³ (indicative limit value) |
| Portugal | OEL chemical category (PT) | A4 - Not Classifiable as a Human Carcinogen |
| 2,6-Di-tert-butyl-p-cresol (128-37-0) | | |
| Austria | MAK (mg/m ³) | 10 mg/m ³ |

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| 2,6-Di-tert-butyl-p-cresol (128-37-0) | | |
|--|---|--|
| Belgium | Limit value (mg/m ³) | 2 mg/m ³ (aerosol and vapor) |
| Bulgaria | OEL TWA (mg/m ³) | 10 mg/m ³ |
| Bulgaria | OEL STEL (mg/m ³) | 50 mg/m ³ |
| Croatia | GVI (granična vrijednost izloženosti) (mg/m ³) | 10 mg/m ³ |
| France | VME (mg/m ³) | 10 mg/m ³ |
| Germany | TRGS 900 Occupational exposure limit value (mg/m ³) | 10 mg/m ³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed-inhalable fraction) |
| USA ACGIH | ACGIH TWA (mg/m ³) | 2 mg/m ³ (inhalable fraction and vapor) |
| Spain | VLA-ED (mg/m ³) | 10 mg/m ³ |
| United Kingdom | WEL TWA (mg/m ³) | 10 mg/m ³ |
| United Kingdom | WEL STEL (mg/m ³) | 30 mg/m ³ (calculated) |
| Denmark | Grænseværdie (langvarig) (mg/m ³) | 10 mg/m ³ |
| Finland | HTP-arvo (8h) (mg/m ³) | 10 mg/m ³ |
| Finland | HTP-arvo (15 min) | 20 mg/m ³ |
| Ireland | OEL (8 hours ref) (mg/m ³) | 10 mg/m ³ |
| Ireland | OEL (15 min ref) (mg/m ³) | 30 mg/m ³ (calculated) |
| Slovenia | OEL TWA (mg/m ³) | 10 mg/m ³ (inhalable fraction) |
| Portugal | OEL TWA (mg/m ³) | 2 mg/m ³ (inhalable fraction, aerosol and vapor) |
| Portugal | OEL chemical category (PT) | A4 - Not Classifiable as a Human Carcinogen |
| Dibenzoyl peroxide (94-36-0) | | |
| Austria | MAK (mg/m ³) | 5 mg/m ³ (inhalable fraction) |
| Austria | MAK Short time value (mg/m ³) | 10 mg/m ³ (inhalable fraction) |
| Belgium | Limit value (mg/m ³) | 5 mg/m ³ |
| Croatia | GVI (granična vrijednost izloženosti) (mg/m ³) | 5 mg/m ³ |
| France | VME (mg/m ³) | 5 mg/m ³ |
| Germany | TRGS 900 Occupational exposure limit value (mg/m ³) | 5 mg/m ³ (inhalable fraction) |
| USA ACGIH | ACGIH TWA (mg/m ³) | 5 mg/m ³ |
| Spain | VLA-ED (mg/m ³) | 5 mg/m ³ |
| United Kingdom | WEL TWA (mg/m ³) | 5 mg/m ³ |
| United Kingdom | WEL STEL (mg/m ³) | 15 mg/m ³ (calculated) |
| Czech Republic | Expoziční limity (PEL) (mg/m ³) | 5 mg/m ³ |
| Denmark | Grænseværdie (langvarig) (mg/m ³) | 5 mg/m ³ |
| Finland | HTP-arvo (8h) (mg/m ³) | 5 mg/m ³ |
| Finland | HTP-arvo (15 min) | 10 mg/m ³ |
| Hungary | AK-érték | 5 mg/m ³ |
| Hungary | CK-érték | 5 mg/m ³ |
| Ireland | OEL (8 hours ref) (mg/m ³) | 5 mg/m ³ |
| Ireland | OEL (15 min ref) (mg/m ³) | 15 mg/m ³ (calculated) |

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| Dibenzoyl peroxide (94-36-0) | | |
|------------------------------|---------------------------------------|---|
| Poland | NDS (mg/m ³) | 5 mg/m ³ |
| Poland | NDSch (mg/m ³) | 10 mg/m ³ |
| Slovakia | NPHV (priemerná) (mg/m ³) | 5 mg/m ³ |
| Slovakia | NPHV (Hraničná) (mg/m ³) | 5 mg/m ³ |
| Slovenia | OEL TWA (mg/m ³) | 5 mg/m ³ (inhalable fraction) |
| Slovenia | OEL STEL (mg/m ³) | 5 mg/m ³ (inhalable fraction) |
| Portugal | OEL TWA (mg/m ³) | 5 mg/m ³ |
| Portugal | OEL chemical category (PT) | A4 - Not Classifiable as a Human Carcinogen |

8.2. Exposure controls

Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits.

Personal protective equipment : Safety glasses. Gloves. Protective clothing. Insufficient ventilation: wear respiratory protection.



Hand protection : Wear chemically resistant protective gloves.

Eye protection : Chemical goggles or safety glasses.

Skin and body protection : Wear suitable protective clothing.

Respiratory protection : If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn.

Other information : When using, do not eat, drink or smoke.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|---------------------|
| Physical state | : Liquid |
| Colour | : No data available |
| Odour | : No data available |
| Odour threshold | : No data available |
| pH | : No data available |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : No data available |
| Freezing point | : No data available |
| Boiling point | : No data available |
| Flash point | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : No data available |
| Vapour pressure | : No data available |
| Relative vapour density at 20 °C | : No data available |
| Relative Density | : No data available |
| Solubility | : No data available |
| Partition coefficient: n-octanol/water | : No data available |
| Viscosity, kinematic | : No data available |

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| | |
|----------------------|---------------------|
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : Not applicable |

9.2. Other information

VOC content : < 1 %

SECTION 10: Stability and reactivity

10.1. Reactivity

No reactivity hazard.

10.2. Chemical stability

Product is stable.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizers.

10.6. Hazardous decomposition products

Hydrocarbons. Carbon oxides (CO, CO₂).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

| Dual Cure Resin Cement Catalyst | |
|---------------------------------------|--|
| ATE CLP (oral) | 471,429 mg/kg bodyweight |
| Aluminum oxide (1344-28-1) | |
| LD50 oral rat | > 15900 mg/kg |
| LC50 inhalation rat (mg/l) | > 2,3 mg/l/4h |
| Barium (7440-39-3) | |
| LD50 oral rat | 132 mg/kg |
| 2,6-Di-tert-butyl-p-cresol (128-37-0) | |
| LD50 oral rat | > 2930 mg/kg (Species: Sprague-Dawley) |
| LD50 dermal rat | > 2000 mg/kg |

| | |
|--|---|
| Skin corrosion/irritation | : Causes skin irritation. |
| Serious eye damage/irritation | : Causes serious eye irritation. |
| Respiratory or skin sensitisation | : May cause an allergic skin reaction. |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : May damage fertility or the unborn child. |
| Specific target organ toxicity (single exposure) | : May cause respiratory irritation. |
| Specific target organ toxicity (repeated exposure) | : Not classified |
| Aspiration hazard | : Not classified |

SECTION 12: Ecological information

12.1. Toxicity

| Boron oxide (B2O3) (1303-86-2) | |
|--------------------------------|---|
| EC50 Daphnia 1 | 370 - 490 mg/l (Exposure time: 48 h - Species: Daphnia magna) |

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| Aluminum oxide (1344-28-1) | |
|---------------------------------------|--|
| LC50 fishes 1 | 14,6 mg/l |
| EC50 Daphnia 1 | 38,2 mg/l |
| NOEC (acute) | > 50 mg/l |
| 2,6-Di-tert-butyl-p-cresol (128-37-0) | |
| EC50 other aquatic organisms 2 | 0,43 mg/l (Exposure time: 72 h - Species: Desmodesmus subspicatus) |

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

| 2,6-Di-tert-butyl-p-cresol (128-37-0) | |
|---------------------------------------|------------|
| BCF fish 1 | 230 - 2500 |
| Log Pow | 4,17 |

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

| Boron oxide (B2O3) (1303-86-2) | |
|--|--|
| This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII | |
| This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII | |

12.6. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose of waste material in accordance with all local, regional, national, and international regulations.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

Not regulated for transport

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

Other information : No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

No additional information available

14.6.2. Transport by sea

No additional information available

14.6.3. Air transport

No additional information available

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

Not applicable

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according to Regulation (EC) No. 453/2010

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

The following restrictions are applicable according to Annex XVII of the REACH Regulation (EC) No 1907/2006:

| | |
|---|--|
| 3. Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008 | Dual Cure Resin Cement Catalyst |
| 3.b. Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10 | Triethylene glycol dimethacrylate |
| 3.c. Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1 | Poly(oxy-1,2-ethanediyl), .alpha.,.alpha.'-[(1-methylethylidene)di-4,1-phenylene]bis[.omega.-[(2-methyl-1-oxo-2-propenyl)oxy]- |
| 30. Substances which appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 classified as Toxic to Reproduction category 1A or 1B (Table 3.1) or Toxic to Reproduction category 1 or 2 (Table 3.2) and listed as follows: Reproductive toxicant category 1A adverse effects on sexual function and fertility or on development (Table 3.1) or Reproductive toxicant category 1 with R60 (May impair fertility) or R61 (May cause harm to the unborn child) (Table 3.2) listed in Appendix 5 Reproductive toxicant category 1B adverse effects on sexual function and fertility or on development (Table 3.1) or Reproductive toxicant category 2 with R60 (May impair fertility) or R61 (May cause harm to the unborn child) (Table 3.2) listed in Appendix 6 | Boron oxide (B2O3) |

Contains substance on the REACH candidate list in concentration $\geq 0.1\%$ or with a lower specific limit: Diboron trioxide (EC 215-125-8, CAS 1303-86-2)

Contains no REACH Annex XIV substances

VOC content : $< 1\%$

Other information, restriction and prohibition regulations : This substance is for use in medicinal products, and as such, is exempt from REACH registration requirements.

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Revision date : 27/02/2015

Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

Full text of R-, H- and EUH-phrases

| | |
|---------------------|---|
| Acute Tox. 3 (Oral) | Acute toxicity (oral), Category 3 |
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Aquatic Acute 1 | Hazardous to the aquatic environment — Acute Hazard, Category 1 |
| Aquatic Chronic 1 | Hazardous to the aquatic environment — Chronic Hazard, Category 1 |
| Aquatic Chronic 3 | Hazardous to the aquatic environment — Chronic Hazard, Category 3 |

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| | |
|-------------------|---|
| Aquatic Chronic 4 | Hazardous to the aquatic environment — Chronic Hazard, Category 4 |
| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 |
| Org. Perox. B | Organic Peroxides, Type B |
| Repr. 1B | Reproductive toxicity, Category 1B |
| Repr. 1B | Reproductive toxicity, Category 1B |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| Skin Sens. 1 | Sensitisation — Skin, category 1 |
| STOT SE 3 | Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation |
| Water-react. 2 | Substances and Mixtures which, in contact with water, emit flammable gases, Category 2 |
| H241 | Heating may cause a fire or explosion |
| H261 | In contact with water releases flammable gases |
| H301 | Toxic if swallowed |
| H302 | Harmful if swallowed |
| H315 | Causes skin irritation |
| H317 | May cause an allergic skin reaction |
| H319 | Causes serious eye irritation |
| H335 | May cause respiratory irritation |
| H360 | May damage fertility or the unborn child |
| H360FD | May damage fertility. May damage the unborn child |
| 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 |
| H413 | May cause long lasting harmful effects to aquatic life |
| R22 | Harmful if swallowed |
| R25 | Toxic if swallowed |
| R3 | Extreme risk of explosion by shock, friction, fire or other sources of ignition |
| R36 | Irritating to eyes |
| R36/37/38 | Irritating to eyes, respiratory system and skin |
| R36/38 | Irritating to eyes and skin |
| R43 | May cause sensitisation by skin contact |
| R50/53 | Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment |
| R52/53 | Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment |
| R53 | May cause long-term adverse effects in the aquatic environment |
| R60 | May impair fertility |
| R61 | May cause harm to the unborn child |
| R7 | May cause fire |
| E | Explosive |
| N | Dangerous for the environment |
| O | Oxidising |
| T | Toxic |
| Xi | Irritant |
| Xn | Harmful |

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.