

Safety Data Sheet according to Regulation (EC) No 1907/2006

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LOCTITE ABLESTIK QMI536NB known as QMI 536NB 5CC EFD 6.3g

SDS No. : 259557 V004.0 Revision: 05.06.2019 printing date: 23.04.2020 Replaces version from: 03.09.2018

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

1.1. Product identifier

LOCTITE ABLESTIK QMI536NB known as QMI 536NB 5CC EFD 6.3g

- **1.2. Relevant identified uses of the substance or mixture and uses advised against** Intended use: Die attach adhesive
- **1.3. Details of the supplier of the safety data sheet** Henkel Ltd Wood Lane End

HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 1442 278000 Fax-no.: +44 1442 278071

ua-productsafety.uk@henkel.com

1.4. Emergency telephone number

24 Hours Emergency Tel: +44 (0)1442 278497

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

| Classification (CLP): | |
|---|------------|
| Acute toxicity | Category 4 |
| H302 Harmful if swallowed. | |
| Route of Exposure: Oral | |
| Skin irritation | Category 2 |
| H315 Causes skin irritation. | |
| Skin sensitizer | Category 1 |
| H317 May cause an allergic skin reaction. | |

2.2. Label elements

Label elements (CLP):

| Hazard pictogra | am: |
|-----------------|-----|
|-----------------|-----|



t-Butylcyclohexylpercarbonate Epoxycyclohexylethyltrimethoxysilane

| Signal word: | Warning |
|--|---|
| Hazard statement: | H302 Harmful if swallowed. H315 Causes skin irritation. H317 May cause an allergic skin reaction. |
| Precautionary statement: Prevention | P280 Wear protective gloves. |
| Precautionary statement: Response | P333+P313 If skin irritation or rash occurs: Get medical advice/attention. P302+P352 IF ON SKIN: Wash with plenty of soap and water. |

2.3. Other hazards

None if used properly. Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

General chemical description:

Polyamino-bis-maleimide resin

Base substances of preparation:

polymers

Bismaleimide resin

Declaration of the ingredients according to CLP (EC) No 1272/2008:

| Hazardous components CAS-No. | EC Number REACH-Reg No. | content | Classification |
|---|-------------------------------|----------|---|
| Amines, C36-alkylenedi-, maleated 682800-79-9 | | 25- 50 % | Acute Tox. 4 H302 Acute Tox. 4 H312 Skin Irrit. 2 H315 |
| t-Butylcyclohexylpercarbonate 15520-11-3 | 239-557-1 01-2119966122-42 | 1-< 5% | Org. Perox. C H242 Skin Sens. 1 H317 Aquatic Chronic 4 H413 |
| Epoxycyclohexylethyltrimethoxysilane 3388-04-3 | 222-217-1 | 0,1-< 1% | Skin Sens. 1B H317 Muta. 2 H341 Carc. 2 H351 Aquatic Chronic 3 H412 |
| Toluene 108-88-3 | 203-625-9 01-2119471310-51 | 0,1-< 1% | Flam. Liq. 2 H225 Repr. 2 H361d Asp. Tox. 1 H304 STOT RE 2; Inhalation H373 Skin Irrit. 2 H315 STOT SE 3; Inhalation H336 Aquatic Chronic 3 H412 |

For full text of the H - statements and other abbreviations see section 16 "Other information".

Substances without classification may have community workplace exposure limits available.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation: Move to fresh air, consult doctor if complaint persists.

Skin contact: Rinse with running water and soap. Apply replenishing cream. Change all contaminated clothing. If necessary, see a dermatologist.

Eye contact: Wash with plenty of water immediately and continue for several minutes, holding eyelid open. Consult a doctor.

Ingestion: Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

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

INGESTION: Nausea, vomiting, diarrhea, abdominal pain.

SKIN: Redness, inflammation.

Prolonged or repeated contact may cause eye irritation.

SKIN: Rash, Urticaria.

4.3. Indication of any immediate medical attention and special treatment needed See section: Description of first aid measures

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Foam, extinguishing powder, carbon dioxide. Water spray jet

Extinguishing media which must not be used for safety reasons: High pressure waterjet

5.2. Special hazards arising from the substance or mixture

Danger of decomposition if exposed to heat. In the event of a fire, carbon monoxide (CO), carbon dioxide (CO2) and nitrogen oxides (NOx) can be released.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Additional information:

In case of fire, keep containers cool with water spray.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with skin and eyes. Wear protective equipment. Ensure adequate ventilation.

6.2. Environmental precautions

Do not empty into drains / surface water / ground water.

6.3. Methods and material for containment and cleaning up

Remove mechanically.

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). For small spills wipe up with paper towel and place in container for disposal. Dispose of contaminated material as waste according to Section 13.

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not spray onto flames or red-hot objects. Ensure good ventilation/suction at the workplace. Extract when the product is heated. Wash hands before breaks and immediately after handling the product. Avoid skin and eye contact. See advice in section 8

Hygiene measures:

Do not eat, drink or smoke while working. Wash hands before work breaks and after finishing work. Good industrial hygiene practices should be observed.

7.2. Conditions for safe storage, including any incompatibilities

Store in sealed original container. Store in a cool, dry place. Ensure that storage and workrooms are adequately ventilated. Must be stored in a room with spill collection facilities. Keep away from heat and direct sunlight. Refer to Technical Data Sheet

7.3. Specific end use(s)

Die attach adhesive

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for

Great Britain

| Ingredient [Regulated substance] | ррт | mg/m ³ | Value type | Short term exposure limit category / Remarks | Regulatory list |
|--|-----|-------------------|--------------------------------------|--|-----------------|
| Titanium dioxide 13463-67-7 [TITANIUM DIOXIDE, TOTAL INHALABLE] | | 10 | Time Weighted Average (TWA): | | EH40 WEL |
| Titanium dioxide 13463-67-7 [TITANIUM DIOXIDE, RESPIRABLE] | | 4 | Time Weighted Average (TWA): | | EH40 WEL |
| Toluene 108-88-3 [TOLUENE] | 50 | 191 | Time Weighted Average (TWA): | | EH40 WEL |
| Toluene 108-88-3 [TOLUENE] | 100 | 384 | Short Term Exposure Limit (STEL): | | EH40 WEL |
| Toluene 108-88-3 [TOLUENE] | | | Skin designation: | Can be absorbed through the skin. | EH40 WEL |
| Toluene 108-88-3 [TOLUENE] | 50 | 192 | Time Weighted Average (TWA): | Indicative | ECTLV |
| Toluene 108-88-3 [TOLUENE] | 100 | 384 | Short Term Exposure Limit (STEL): | Indicative | ECTLV |

Occupational Exposure Limits

Valid for

Ireland

| Ingredient [Regulated substance] | ррт | mg/m ³ | Value type | Short term exposure limit category / Remarks | Regulatory list |
|---|-----|-------------------|--------------------------------------|--|-----------------|
| Titanium dioxide 13463-67-7 [TITANIUM DIOXIDE, RESPIRABLE DUST] | | 4 | Time Weighted Average (TWA): | | IR_OEL |
| Titanium dioxide 13463-67-7 [TITANIUM DIOXIDE, TOTAL INHALABLE DUST] | | 10 | Time Weighted Average (TWA): | | IR_OEL |
| Toluene 108-88-3 [TOLUENE] | 50 | 192 | Time Weighted Average (TWA): | Indicative OELV | IR_OEL |
| Toluene 108-88-3 [TOLUENE] | | | Skin designation: | Can be absorbed through the skin. | IR_OEL |
| Toluene 108-88-3 [TOLUENE] | 50 | 192 | Time Weighted Average (TWA): | Indicative | ECTLV |
| Toluene 108-88-3 [TOLUENE] | 100 | 384 | Short Term Exposure Limit (STEL): | Indicative | ECTLV |
| Toluene 108-88-3 [TOLUENE] | 100 | 384 | Short Term Exposure Limit (STEL): | 15 minutes Indicative OELV | IR_OEL |

Predicted No-Effect Concentration (PNEC):

| Name on list | Environmental Compartment | Exposure period | Value | | | | Remarks |
|--|------------------------------------|--------------------|------------|-----|----------------|--------|---------|
| | - | Î. | mg/l | ppm | mg/kg | others | |
| Bis(4-tert-butylcyclohexyl) peroxydicarbonate 15520-11-3 | aqua (freshwater) | | 0,39 mg/l | | | | |
| Bis(4-tert-butylcyclohexyl) peroxydicarbonate 15520-11-3 | aqua (marine water) | | 0,039 mg/l | | | | |
| Bis(4-tert-butylcyclohexyl) peroxydicarbonate 15520-11-3 | aqua (intermittent releases) | | 0,39 mg/l | | | | |
| Bis(4-tert-butylcyclohexyl) peroxydicarbonate 15520-11-3 | aqua (freshwater) | | | | 4685 mg/kg | | |
| Bis(4-tert-butylcyclohexyl) peroxydicarbonate 15520-11-3 | sediment (marine water) | | | | 468,5 mg/kg | | |
| Bis(4-tert-butylcyclohexyl) peroxydicarbonate 15520-11-3 | Soil | | | | 936,8 mg/kg | | |
| Bis(4-tert-butylcyclohexyl) peroxydicarbonate 15520-11-3 | sewage treatment plant (STP) | | 2 mg/l | | | | |
| Toluene 108-88-3 | aqua (freshwater) | | 0,68 mg/l | | | | |
| Toluene 108-88-3 | sediment (freshwater) | | | | 16,39 mg/kg | | |
| Toluene 108-88-3 | sediment (marine water) | | | | 16,39 mg/kg | | |
| Toluene 108-88-3 | Soil | | | | 2,89 mg/kg | | |
| Toluene 108-88-3 | sewage treatment plant (STP) | | 13,61 mg/l | | | | |
| Toluene 108-88-3 | aqua (marine water) | | 0,68 mg/l | | | | |
| Toluene 108-88-3 | aqua (intermittent releases) | | 0,68 mg/l | | | | |

Derived No-Effect Level (DNEL):

| Name on list | Application Area | Route of Exposure | Health Effect | Exposure Time | Value | Remarks |
|--|-----------------------|----------------------|--|------------------|-------------|---------|
| Bis(4-tert-butylcyclohexyl) peroxydicarbonate 15520-11-3 | Workers | inhalation | Long term exposure - systemic effects | | 5,87 mg/m3 | |
| Bis(4-tert-butylcyclohexyl) peroxydicarbonate 15520-11-3 | Workers | dermal | Long term exposure - systemic effects | | 16,67 mg/kg | |
| Toluene 108-88-3 | Workers | Inhalation | Acute/short term exposure - local effects | | 384 mg/m3 | |
| Toluene 108-88-3 | Workers | Inhalation | Acute/short term exposure - systemic effects | | 384 mg/m3 | |
| Toluene 108-88-3 | Workers | Inhalation | Long term exposure - local effects | | 192 mg/m3 | |
| Toluene 108-88-3 | Workers | Inhalation | Long term exposure - systemic effects | | 192 mg/m3 | |
| Toluene 108-88-3 | Workers | dermal | Long term exposure - systemic effects | | 384 mg/kg | |
| Toluene 108-88-3 | General population | Inhalation | Acute/short term exposure - local effects | | 226 mg/m3 | |
| Toluene 108-88-3 | General population | Inhalation | Acute/short term exposure - systemic effects | | 226 mg/m3 | |
| Toluene 108-88-3 | General population | Inhalation | Long term exposure - systemic effects | | 56,5 mg/m3 | |
| Toluene 108-88-3 | General population | dermal | Long term exposure - systemic effects | | 226 mg/kg | |
| Toluene 108-88-3 | General population | oral | Long term exposure - systemic effects | | 8,13 mg/kg | |
| Toluene 108-88-3 | General population | inhalation | Long term exposure - local effects | | 56,5 mg/m3 | |

Biological Exposure Indices:

None

8.2. Exposure controls:

Engineering controls: Ensure good ventilation/extraction.

Respiratory protection: Suitable breathing mask when there is inadequate ventilation. Suitable respiratory protection: Filter type: A (EN 14387)

Hand protection:

Chemical-resistant protective gloves (EN 374).

Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):

nitrile rubber (NBR; ≥ 0.4 mm thickness)

Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):

nitrile rubber (NBR; >= 0.4 mm thickness)

This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection: Goggles which can be tightly sealed. and/or protective shield Protective eye equipment should conform to EN166.

Skin protection: Wear protective equipment. Suitable protective clothing apron Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:

The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions. Personal protective equipment should conform to the relevant EN standard.

SECTION 9: Physical and chemical properties

| 9.1. Information on basic physical and chemical p | roperties |
|---|---|
| Appearance | liquid |
| | pasty |
| | white |
| Odor | mild |
| Odour threshold | No data available / Not applicable |
| | |
| pH | Not applicable |
| Melting point | No data available / Not applicable |
| Solidification temperature | No data available / Not applicable |
| Initial boiling point | Polymerization may occur at elevated temperature. |
| Flash point | > 163 °C (> 325.4 °F) |
| Evaporation rate | No data available / Not applicable |
| Flammability | No data available / Not applicable |
| Explosive limits | No data available / Not applicable |
| Vapour pressure | No data available / Not applicable |
| Relative vapour density: | No data available / Not applicable |
| Density | 1,37 g/cm3 |
| (20 °C (68 °F)) | |
| Bulk density | No data available / Not applicable |
| Solubility | No data available / Not applicable |
| Solubility (qualitative) | Insoluble |
| (Solvent: Water) | |
| Partition coefficient: n-octanol/water | No data available / Not applicable |
| Auto-ignition temperature | No data available / Not applicable |
| Decomposition temperature | No data available / Not applicable |
| Viscosity | No data available / Not applicable |
| Viscosity (kinematic) | No data available / Not applicable |
| Explosive properties | No data available / Not applicable |
| Oxidising properties | No data available / Not applicable |
| | |

9.2. Other information

No data available / Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with oxidants, acids and lyes Reaction with reducing agents. Peroxides.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

Danger of decomposition if exposed to heat. Do not heat mixed adhesive unless you plan to use immediately. Failure to observe these precautions may result in excessive heat build-up causing an exotherm. Stable under normal conditions of storage and use.

10.5. Incompatible materials

See section reactivity.

10.6. Hazardous decomposition products

Hydrocarbons carbon oxides. nitrogen oxides Polymerization may occur at elevated temperature or in the presence of incompatible materials. Rapid polymerisation may generate excessive heat and pressure. At higher temperature hydrogene fluoride may be generated. At higher temperatures toxic gases may be generated. See section 5.

SECTION 11: Toxicological information

General toxicological information:

Persons suffering from allergic reactions to epoxides should avoid contact with the product. Prolonged or repeated contact may cause eye irritation.

11.1. Information on toxicological effects

Acute oral toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances | Value | Value | Species | Method |
|--------------------------|-------|---------------|---------|---|
| CAS-No. | type | | | |
| t- | LD50 | > 5.000 mg/kg | rat | equivalent or similar to OECD Guideline 401 (Acute Oral |
| Butylcyclohexylpercarbon | | | | Toxicity) |
| ate | | | | |
| 15520-11-3 | | | | |
| Epoxycyclohexylethyltri | LD50 | 13.000 mg/kg | rat | |
| methoxysilane | | | | |
| 3388-04-3 | | | | |
| Toluene | LD50 | 5.580 mg/kg | rat | EU Method B.1 (Acute Toxicity (Oral)) |
| 108-88-3 | | | | |

Acute dermal toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Value type | Value | Species | Method |
|---|---------------|---------------|---------|---------------|
| Epoxycyclohexylethyltri methoxysilane 3388-04-3 | LD50 | 6.700 mg/kg | rabbit | |
| Toluene 108-88-3 | LD50 | > 5.000 mg/kg | rabbit | not specified |

Acute inhalative toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances | Value | Value | Test atmosphere | Exposure | Species | Method |
|----------------------|-------|-----------|-----------------|----------|---------|---------------------------|
| CAS-No. | type | | | time | | |
| Toluene | LC50 | 28,1 mg/l | vapour | 4 h | rat | OECD Guideline 403 (Acute |
| 108-88-3 | | | | | | Inhalation Toxicity) |

Skin corrosion/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Result | Exposure time | Species | Method |
|---------------------------------|------------|------------------|---------|--|
| Toluene | irritating | 4 h | rabbit | EU Method B.4 (Acute Toxicity: Dermal Irritation / |
| 108-88-3 | | | | Corrosion) |

Serious eye damage/irritation:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Result | Exposure time | Species | Method |
|---------------------------------|----------------|------------------|---------|---|
| Toluene 108-88-3 | not irritating | | rabbit | OECD Guideline 405 (Acute Eye Irritation / Corrosion) |

Respiratory or skin sensitization:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Result | Test type | Species | Method |
|---|-----------------|---------------------------------------|------------|--|
| t- Butylcyclohexylpercarbon ate 15520-11-3 | sensitising | Mouse local lymphnode assay (LLNA) | mouse | OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay) |
| Epoxycyclohexylethyltri methoxysilane 3388-04-3 | sensitising | Buehler test | guinea pig | OECD Guideline 406 (Skin Sensitisation) |
| Toluene 108-88-3 | not sensitising | Guinea pig maximisation test | guinea pig | EU Method B.6 (Skin Sensitisation) |

Germ cell mutagenicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Result | Type of study / Route of administration | Metabolic activation / Exposure time | Species | Method |
|---------------------------------|----------|--|--|---------|---|
| Toluene 108-88-3 | negative | bacterial reverse mutation assay (e.g Ames test) | with and without | | EU Method B.13/14 (Mutagenicity) |
| Toluene 108-88-3 | negative | mammalian cell gene mutation assay | with and without | | OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test) |

Carcinogenicity

No data available.

Reproductive toxicity:

No data available.

STOT-single exposure:

No data available.

STOT-repeated exposure::

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

| Hazardous substances CAS-No. | Result / Value | Route of application | Exposure time / Frequency of treatment | Species | Method |
|---------------------------------|-----------------|----------------------|--|---------|--|
| Toluene 108-88-3 | NOAEL 625 mg/kg | oral: gavage | 13 weeks daily, 5 days/ week | rat | EU Method B.26 (Sub- Chronic Oral Toxicity Test: Repeated Dose 90- Day Oral Toxicity Study in Rodents) |

Aspiration hazard:

The mixture is classified based on Viscosity data.

| Hazardous substances CAS-No. | Viscosity (kinematic) Value | Temperature | Method | Remarks |
|---------------------------------|--------------------------------|-------------|---------------|---------|
| Toluene 108-88-3 | 0,57 mm2/s | 40 °C | not specified | |

SECTION 12: Ecological information

General ecological information:

Do not empty into drains / surface water / ground water.

12.1. Toxicity

Toxicity (Fish):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances | Value | Value | Exposure time | Species | Method |
|---|-------|-----------|---------------|----------------------|--|
| CAS-No. | type | | | | |
| Epoxycyclohexylethyltrimetho xysilane 3388-04-3 | LC50 | 42,3 mg/l | 96 h | Cyprinus carpio | OECD Guideline 203 (Fish, Acute Toxicity Test) |
| Toluene 108-88-3 | NOEC | 3,2 mg/l | 28 d | 51 0 | OECD Guideline 204 (Fish, Prolonged Toxicity Test: 14-day Study) |
| Toluene 108-88-3 | LC50 | 5,5 mg/l | 96 h | Oncorhynchus kisutch | OECD Guideline 203 (Fish, Acute Toxicity Test) |

Toxicity (Daphnia):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances | Value | Value | Exposure time | Species | Method |
|-------------------------------|-------|-----------|---------------|---------------|----------------------|
| CAS-No. | type | | | | |
| t-Butylcyclohexylpercarbonate | EC50 | | 48 h | Daphnia magna | OECD Guideline 202 |
| 15520-11-3 | | | | | (Daphnia sp. Acute |
| | | | | | Immobilisation Test) |
| Epoxycyclohexylethyltrimetho | EC50 | 58 mg/l | 48 h | Daphnia magna | OECD Guideline 202 |
| xysilane | | - | | | (Daphnia sp. Acute |
| 3388-04-3 | | | | | Immobilisation Test) |
| Toluene | EC50 | 11,5 mg/l | 48 h | Daphnia magna | OECD Guideline 202 |
| 108-88-3 | | | | | (Daphnia sp. Acute |
| | | | | | Immobilisation Test) |

Chronic toxicity to aquatic invertebrates

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances | Value | Value | Exposure time | Species | Method |
|------------------------------|-------|-----------|---------------|--------------------|---------------------------|
| CAS-No. | type | | | | |
| Epoxycyclohexylethyltrimetho | NOEC | 16 mg/l | 21 d | Daphnia magna | OECD 211 (Daphnia |
| xysilane | | | | | magna, Reproduction Test) |
| 3388-04-3 | | | | | |
| Toluene | NOEC | 0,74 mg/l | 7 d | Ceriodaphnia dubia | other guideline: |
| 108-88-3 | | - | | - | - |

Toxicity (Algae):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances | Value | Value | Exposure time | Species | Method |
|---|-------|---------|---------------|---|--|
| CAS-No. | type | | | | |
| t-Butylcyclohexylpercarbonate 15520-11-3 | EC50 | | 72 h | Desmodesmus subspicatus | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| t-Butylcyclohexylpercarbonate 15520-11-3 | | | 72 h | Desmodesmus subspicatus | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Epoxycyclohexylethyltrimetho xysilane 3388-04-3 | NOEC | 6 mg/l | | Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Epoxycyclohexylethyltrimetho xysilane 3388-04-3 | EC50 | 90 mg/l | | Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata) | OECD Guideline 201 (Alga, Growth Inhibition Test) |
| Toluene 108-88-3 | IC50 | 12 mg/l | | Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata) | OECD Guideline 201 (Alga, Growth Inhibition Test) |

Toxicity to microorganisms

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

| Hazardous substances | Value | Value | Exposure time | Species | Method |
|------------------------------|-------|------------|---------------|--------------------|------------------------------|
| CAS-No. | type | | | | |
| Epoxycyclohexylethyltrimetho | EC 50 | > 100 mg/l | 30 min | | OECD Guideline 209 |
| xysilane | | | | | (Activated Sludge, |
| 3388-04-3 | | | | | Respiration Inhibition Test) |
| Toluene | NOEC | 29 mg/l | 16 h | Pseudomonas putida | DIN 38412, part 8 |
| 108-88-3 | | - | | - | (Pseudomonas |
| | | | | | Zellvermehrungshemm- |
| | | | | | Test) |

12.2. Persistence and degradability

The product is not biodegradable.

| Hazardous substances CAS-No. | Result | Test type | Degradability | Exposure time | Method |
|---|----------------------------|-----------|---------------|------------------|---|
| t-Butylcyclohexylpercarbonate 15520-11-3 | not readily biodegradable. | aerobic | 3 % | 28 d | OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test) |
| Epoxycyclohexylethyltrimetho xysilane 3388-04-3 | | aerobic | 28 % | 28 d | OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test) |
| Toluene 108-88-3 | readily biodegradable | aerobic | 80 % | 20 d | OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test) |

12.3. Bioaccumulative potential

No data available.

| Hazardous substances | Bioconcentratio | Exposure time | Temperature | Species | Method |
|----------------------|-----------------|---------------|-------------|----------------|---------------------------------|
| CAS-No. | n factor (BCF) | | | | |
| Toluene | 90 | 3 d | | Leuciscus idus | OECD Guideline 305 |
| 108-88-3 | | | | melanotus | (Bioconcentration: Flow-through |
| | | | | | Fish Test) |

12.4. Mobility in soil

Cured adhesives are immobile.

| Hazardous substances | LogPow | Temperature | Method |
|---|--------|-------------|---|
| CAS-No. | | | |
| t-Butylcyclohexylpercarbonate 15520-11-3 | 8,34 | | QSAR (Quantitative Structure Activity Relationship) |
| Epoxycyclohexylethyltrimetho xysilane 3388-04-3 | 4,1 | 23 °C | OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method) |
| Toluene 108-88-3 | 2,73 | 20 °C | EU Method A.8 (Partition Coefficient) |

12.5. Results of PBT and vPvB assessment

| Hazardous substances CAS-No. | PBT / vPvB |
|---|--|
| t-Butylcyclohexylpercarbonate 15520-11-3 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |
| Toluene 108-88-3 | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria. |

12.6. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

Dispose of in accordance with local and national regulations.

Collection and delivery to recycling enterprise or other registered elimination institution.

Disposal of uncleaned packages:

Disposal must be made according to official regulations.

Use packages for recycling only when totally empty.

Packaging that cannot be cleaned are to be disposed of in the same manner as the product.

Waste code

08 04 09 waste adhesives and sealants containing organic solvents and other dangerous substances

The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.

| | SECTION 14: Transport information |
|-------|--|
| 14.1. | UN number |
| | Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR. |
| 14.2. | UN proper shipping name |
| | Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR. |
| 14.3. | Transport hazard class(es) |
| | Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR. |
| 14.4. | Packing group |
| | Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR. |
| 14.5. | Environmental hazards |
| | Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR. |
| 14.6. | Special precautions for user |
| | Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR. |
| 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 VOC content <3 %

(2010/75/EC)

15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text

of all abbreviations indicated by codes in this safety data sheet are as follows:

H225 Highly flammable liquid and vapor.

H242 Heating may cause a fire.

H302 Harmful if swallowed.

H304 May be fatal if swallowed and enters airways.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H336 May cause drowsiness or dizziness.

H341 Suspected of causing genetic defects.

H351 Suspected of causing cancer.

H361d Suspected of damaging the unborn child.

H373 May cause damage to organs through prolonged or repeated exposure.

H412 Harmful to aquatic life with long lasting effects.

H413 May cause long lasting harmful effects to aquatic life.

Further information:

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This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

Relevant changes in this safety data sheet are indicated by vertical lines at the left margin in the body of this document. Corresponding text is displayed in a different color on shadowed fields.