

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

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sds no.: 409150

V002.0

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Loctite V5004 Part B

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

#### 1.1. Product identifier

Loctite V5004 Part B

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

Intended use:

Adhesive

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

Henkel Limited

2 Bishop Square Business Park AL109EY Herfordshire Hatfield

Great Britain

Phone: +44 1606 593933 +44 1606 863762 Fax-no.:

ua-productsafety.uk@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 (DPD):

F - Highly flammable

R11 Highly flammable.

Xi - Irritant

R41 Risk of serious damage to eyes.

R37/38 Irritating to respiratory system and skin.

Sensitizing

R43 May cause sensitisation by skin contact.

Dangerous for the environment

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

# 2.2. Label elements

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#### Label elements (DPD):

F - Highly flammable







#### Risk phrases:

R11 Highly flammable.

R37/38 Irritating to respiratory system and skin.

R41 Risk of serious damage to eyes.

R43 May cause sensitisation by skin contact.

R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

# Safety phrases:

S16 Keep away from sources of ignition - No smoking.

S24/25 Avoid contact with skin and eyes.

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S37/39 Wear suitable gloves and eye/face protection.

S61 Avoid release to the environment. Refer to special instructions/Safety data sheets.

# Additional labeling:

For consumer use only: S2 Keep out of the reach of children

S46 If swallowed, seek medical advice immediately and show this container or label.

# Contains:

Methyl methacrylate,

Methacrylic acid,

2-Hydroxyethyl methacrylate

# 2.3. Other hazards

Non corrosive to skin in accordance with the invitro test method, B40 skin corrosion - Human skin model assay, specified in Part B of Annex V to Directive 67/548/EEC.

# **SECTION 3: Composition/information on ingredients**

#### General chemical description:

Part B of a two part adhesive

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

| Hazardous components                    | EC Number                     | content     | Classification                                       |
|---|-------------------------------|-------------|--|
| CAS-No.                                 | REACH-Reg No.                 | ********    |  |
| Methyl methacrylate<br>80-62-6          | 201-297-1<br>01-2119452498-28 | 20- 40 %    | Flammable liquids 2<br>H225                          |
| 00 02 0                                 | 01 2119 132 190 20            |             | Skin sensitizer 1<br>H317                            |
|   |                               |             | Skin irritation 2 H315                               |
|   |                               |             | Specific target organ toxicity - single              |
|   |                               |             | exposure 3<br>H335                                   |
| Phenoxyethyl methacrylate<br>10595-06-9 | 234-201-1                     | 5- 15 %     | Serious eye damage/eye irritation 2<br>H319          |
|   |                               |             | Skin corrosion/irritation 2<br>H315                  |
| Methacrylic acid<br>79-41-4             | 201-204-4<br>01-2119463884-26 | > 5-< 10 %  | Acute toxicity 4; Oral<br>H302                       |
|   |                               |             | Acute toxicity 3; Dermal H311                        |
|   |                               |             | Acute toxicity 4; Inhalation H332                    |
|   |                               |             | Skin corrosion/irritation 1A                         |
| Tetrahydrofurfuryl methacrylate         | 219-529-5                     | 1- 10 %     | H314<br>Skin irritation 2; Dermal                    |
| 2455-24-5                               | 217-327-3                     | 1- 10 /0    | H315   |
|   |                               |             | Serious eye irritation 2<br>H319                     |
|   |                               |             | Specific target organ toxicity - single              |
|   |                               |             | exposure 3; Inhalation<br>H335                       |
| 2-Hydroxyethyl methacrylate<br>868-77-9 | 212-782-2<br>01-2119490169-29 | 1- 10 %     | Skin irritation 2<br>H315                            |
|   |                               |             | Serious eye irritation 2<br>H319                     |
|   |                               |             | Skin sensitizer 1<br>H317                            |
| Cumene hydroperoxide<br>80-15-9         | 201-254-7                     | 0,1-< 0,9 % | Acute toxicity 4; Dermal H312                        |
| 00-13-7                                 |                               |             | Specific target organ toxicity - repeated            |
|   |                               |             | exposure 2<br>H373                                   |
|   |                               |             | Acute toxicity 3; Inhalation H331                    |
|   |                               |             | Acute toxicity 4; Oral                               |
|   |                               |             | Organic peroxides E<br>H242                          |
|   |                               |             | Chronic hazards to the aquatic environment 2 H411    |
|   |                               |             | Skin corrosion 1B<br>H314                            |
| 2,6-Di-tert-butyl-p-cresol              | 204-881-4                     | 0,1-< 0,5 % | Acute hazards to the aquatic environment 1           |
| 128-37-0                                | 485-290-0<br>01-2119555270-46 |             | H400<br>Chronic hazards to the aquatic environment 1 |
|   |                               |             | H410   |

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.

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### Declaration of ingredients according to DPD (EC) No 1999/45:

| Hazardous components                      | EC Number                                  | content      | Classification                            |
|---|--|--------------|---|
| CAS-No.                                   | REACH-Reg No.                              |              |   |
| Methyl methacrylate                       | 201-297-1                                  | 20 - 40 %    | Xi - Irritant; R37/38                     |
| 80-62-6                                   | 01-2119452498-28                           |              | R43                                       |
|   |  |              | F - Highly flammable; R11                 |
| Phenoxyethyl methacrylate<br>10595-06-9   | 234-201-1                                  | 5 - 15 %     | Xi - Irritant; R36/38                     |
| Methacrylic acid                          | 201-204-4                                  | > 5 - < 10 % | C - Corrosive; R35                        |
| 79-41-4                                   | 01-2119463884-26                           |              | Xn - Harmful; R20/21/22                   |
| Tetrahydrofurfuryl methacrylate 2455-24-5 | 219-529-5                                  | 1 - 10 %     | Xi - Irritant; R36/37/38                  |
| 2-Hydroxyethyl methacrylate               | 212-782-2                                  | 1 - 10 %     | Xi - Irritant; R36/38                     |
| 868-77-9                                  | 01-2119490169-29                           |              | R43                                       |
| Cumene hydroperoxide                      | 201-254-7                                  | 0,1 -< 0,9 % | T - Toxic; R23                            |
| 80-15-9                                   |  |              | Xn - Harmful; R21/22, R48/20/22           |
|   |  |              | O - Oxidizing; R7                         |
|   |  |              | C - Corrosive; R34                        |
|   |  |              | N - Dangerous for the environment; R51/53 |
| 2,6-Di-tert-butyl-p-cresol<br>128-37-0    | 204-881-4<br>485-290-0<br>01-2119555270-46 | 0,1 -< 0,5 % | N - Dangerous for the environment; R50/53 |

For full text of the R-Phrases indicated by codes 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. If symptoms persist, seek medical advice.

#### Skin contact

Rinse with running water and soap.

Seek medical advice.

# Eye contact:

Rinse immediately with plenty of running water (for 10 minutes). Seek medical attention if necessary.

# Ingestion:

Rinse out mouth, drink 1-2 glasses of water, do not induce vomiting.

Seek medical advice.

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

EYE: Irritation, conjunctivitis.

RESPIRATORY: Irritation, coughing, shortness of breath, chest tightness.

SKIN: Redness, inflammation.

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:

Carbon dioxide, foam, powder Fine water spray MSDS-No.: 409150 Loctite V5004 Part B Page 5 of 15

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### Extinguishing media which must not be used for safety reasons:

None known

#### 5.2. Special hazards arising from the substance or mixture

In the event of a fire, carbon monoxide (CO) and carbon dioxide (CO2) can be released.

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

### 5.3. Advice for firefighters

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

# **SECTION 6: Accidental release measures**

#### 6.1. Personal precautions, protective equipment and emergency procedures

Avoid skin and eye contact.

Remove sources of ignition.

#### 6.2. Environmental precautions

Do not let product enter drains.

#### 6.3. Methods and material for containment and cleaning up

For small spills wipe up with paper towel and place in container for disposal.

For large spills absorb onto inert absorbent material and place in sealed container for disposal.

#### **6.4. Reference to other sections**

See advice in chapter 8

# **SECTION 7: Handling and storage**

# 7.1. Precautions for safe handling

Use only in well-ventilated areas.

Avoid skin and eye contact.

Prolonged or repeated skin contact should be avoided to minimise any risk of sensitisation.

Keep away from sources of ignition - no smoking.

# Hygiene measures:

Good industrial hygiene practices should be observed.

Do not eat, drink or smoke while working.

Wash hands before work breaks and after finishing work.

#### 7.2. Conditions for safe storage, including any incompatibilities

Ensure good ventilation/extraction.

Store in a cool, well-ventilated place.

Keep away from sources of ignition.

#### 7.3. Specific end use(s)

Adhesive

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# **SECTION 8: Exposure controls/personal protection**

# 8.1. Control parameters

# **Occupational Exposure Limits**

Valid for

Great Britain

| Ingredient                 | ppm | mg/m <sup>3</sup> | Type                  | Category | Remarks  |
|----------------------------|-----|-------------------|-----------------------|----------|----------|
| METHYL METHACRYLATE        | 100 | 416               | Short Term Exposure   |          | EH40 WEL |
| 80-62-6                    |     |                   | Limit (STEL):         |          |          |
| METHYL METHACRYLATE        | 50  | 208               | Time Weighted Average |          | EH40 WEL |
| 80-62-6                    |     |                   | (TWA):                |          |          |
| METHACRYLIC ACID           | 20  | 72                | Time Weighted Average |          | EH40 WEL |
| 79-41-4                    |     |                   | (TWA):                |          |          |
| METHACRYLIC ACID           | 40  | 143               | Short Term Exposure   |          | EH40 WEL |
| 79-41-4                    |     |                   | Limit (STEL):         |          |          |
| 2,6-DI-TERT-BUTYL-P-CRESOL |     | 10                | Time Weighted Average |          | EH40 WEL |
| 128-37-0                   |     |                   | (TWA):                |          |          |

# $\label{eq:predicted} \textbf{Predicted No-Effect Concentration (PNEC):}$

| Name on list                            | Environmental<br>Compartment | Exposure period | Value    |     |                | Remarks    |  |
|---|------------------------------|-----------------|----------|-----|----------------|------------|--|
|   | Compartment                  | periou          | mg/l     | ppm | mg/kg          | others     |  |
| Methyl methacrylate                     | aqua                         |                 | g/-      | PP  | 9/9            | 0,94 mg/L  |  |
| 80-62-6                                 | (freshwater)                 |                 |          |     |                | , ,        |  |
| Methyl methacrylate                     | aqua (marine                 |                 |          |     |                | 0,094 mg/L |  |
| 80-62-6                                 | water)                       |                 |          |     |                |            |  |
| Methyl methacrylate                     | aqua                         |                 |          |     |                | 0,94 mg/L  |  |
| 80-62-6                                 | (intermittent                |                 |          |     |                |            |  |
|   | releases)                    |                 |          |     |                |            |  |
| Methyl methacrylate 80-62-6             | STP                          |                 |          |     |                | 10 mg/L    |  |
| Methyl methacrylate                     | sediment                     |                 |          |     | 5,74 mg/kg     |            |  |
| 80-62-6                                 | (freshwater)                 |                 |          |     |                |            |  |
| Methyl methacrylate                     | soil                         |                 |          |     | 1,47 mg/kg     |            |  |
| 80-62-6                                 |                              |                 |          |     |                |            |  |
| 2-Hydroxyethyl methacrylate 868-77-9    | aqua<br>(freshwater)         |                 |          |     |                | 0,482 mg/L |  |
| 2-Hydroxyethyl methacrylate             | aqua (marine                 |                 |          |     |                | 0,482 mg/L |  |
| 868-77-9                                | water)                       |                 |          |     |                |            |  |
| 2-Hydroxyethyl methacrylate<br>868-77-9 | STP                          |                 |          |     |                | 10 mg/L    |  |
| 2-Hydroxyethyl methacrylate             | aqua                         |                 |          |     |                | 1 mg/L     |  |
| 868-77-9                                | (intermittent releases)      |                 |          |     |                |            |  |
| 2-Hydroxyethyl methacrylate             | sediment                     |                 |          |     | 3,79 mg/kg     |            |  |
| 868-77-9                                | (freshwater)                 |                 |          |     |                |            |  |
| 2-Hydroxyethyl methacrylate             | sediment                     |                 |          |     | 3,79 mg/kg     |            |  |
| 868-77-9                                | (marine water)               |                 |          |     |                |            |  |
| 2-Hydroxyethyl methacrylate<br>868-77-9 | soil                         |                 |          |     | 0,476<br>mg/kg |            |  |
| 2,6-di-tert-Butyl-p-cresol<br>128-37-0  | soil                         |                 |          |     | 1,04 mg/kg     |            |  |
| 2,6-di-tert-Butyl-p-cresol<br>128-37-0  | STP                          |                 |          |     |                | 100 mg/L   |  |
| 2,6-di-tert-Butyl-p-cresol              | sediment                     |                 | 1        |     | 1,29 mg/kg     |            |  |
| 128-37-0                                | (freshwater)                 |                 |          |     |                |            |  |
| 2,6-di-tert-Butyl-p-cresol<br>128-37-0  | oral                         |                 |          |     | 16,7 mg/kg     |            |  |
| 2,6-di-tert-Butyl-p-cresol<br>128-37-0  | aqua (marine<br>water)       |                 |          |     |                | 0,4 μg/L   |  |
| 2,6-di-tert-Butyl-p-cresol              | aqua                         |                 | <u> </u> |     |                | 4 μg/L     |  |
| 128-37-0                                | (intermittent releases)      |                 |          |     |                |            |  |
| 2,6-di-tert-Butyl-p-cresol              | aqua                         |                 |          |     |                | 4 μg/L     |  |
| 128-37-0                                | (freshwater)                 |                 |          |     |                |            |  |

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# **Derived No-Effect Level (DNEL):**

| Name on list                            | Application<br>Area   | Route of<br>Exposure | Health Effect                                   | Exposure<br>Time | Value              | Remarks |
|---|-----------------------|----------------------|---|------------------|--------------------|---------|
| Methyl methacrylate<br>80-62-6          | worker                | dermal               | Acute/short term<br>exposure - local<br>effects |                  | 1,5 mg/cm2         |         |
| Methyl methacrylate<br>80-62-6          | worker                | dermal               | Long term<br>exposure -<br>systemic effects     |                  | 13,67 mg/kg bw/day |         |
| Methyl methacrylate<br>80-62-6          | worker                | inhalation           | Long term<br>exposure -<br>systemic effects     |                  | 210 mg/m3          |         |
| Methyl methacrylate<br>80-62-6          | worker                | dermal               | Long term<br>exposure - local<br>effects        |                  | 1,5 mg/cm2         |         |
| Methyl methacrylate<br>80-62-6          | worker                | inhalation           | Long term<br>exposure - local<br>effects        |                  | 210 mg/m3          |         |
| Methyl methacrylate<br>80-62-6          | general<br>population | dermal               | Acute/short term<br>exposure - local<br>effects |                  | 1,5 mg/cm2         |         |
| Methyl methacrylate<br>80-62-6          | general<br>population | dermal               | Long term<br>exposure -<br>systemic effects     |                  | 8,2 mg/kg bw/day   |         |
| Methyl methacrylate<br>80-62-6          | general<br>population | inhalation           | Long term<br>exposure -<br>systemic effects     |                  | 74,3 mg/m3         |         |
| Methyl methacrylate<br>80-62-6          | general<br>population | dermal               | Long term<br>exposure - local<br>effects        |                  | 1,5 mg/cm2         |         |
| Methyl methacrylate<br>80-62-6          | general<br>population | inhalation           | Long term<br>exposure - local<br>effects        |                  | 105 mg/m3          |         |
| Methacrylic acid<br>79-41-4             | worker                | inhalation           | Long term<br>exposure - local<br>effects        |                  | 88 mg/m3           |         |
| Methacrylic acid<br>79-41-4             | worker                | inhalation           | Long term<br>exposure -<br>systemic effects     |                  | 29,6 mg/m3         |         |
| Methacrylic acid<br>79-41-4             | worker                | dermal               | Long term<br>exposure -<br>systemic effects     |                  | 4,25 mg/kg bw/day  |         |
| Methacrylic acid<br>79-41-4             | general<br>population | inhalation           | Long term<br>exposure - local<br>effects        |                  | 6,55 mg/m3         |         |
| Methacrylic acid<br>79-41-4             | general<br>population | inhalation           | Long term<br>exposure -<br>systemic effects     |                  | 6,3 mg/m3          |         |
| Methacrylic acid<br>79-41-4             | general<br>population | dermal               | Long term<br>exposure -<br>systemic effects     |                  | 2,55 mg/kg bw/day  |         |
| 2-Hydroxyethyl methacrylate<br>868-77-9 | worker                | dermal               | Long term<br>exposure -<br>systemic effects     |                  | 1,3 mg/kg bw/day   |         |
| 2-Hydroxyethyl methacrylate<br>868-77-9 | worker                | inhalation           | Long term<br>exposure -<br>systemic effects     |                  | 4,9 mg/m3          |         |
| 2-Hydroxyethyl methacrylate<br>868-77-9 | general<br>population | dermal               | Long term<br>exposure -<br>systemic effects     |                  | 0,83 mg/kg bw/day  |         |
| 2-Hydroxyethyl methacrylate<br>868-77-9 | general<br>population | inhalation           | Long term<br>exposure -<br>systemic effects     |                  | 2,9 mg/m3          |         |
| 2-Hydroxyethyl methacrylate<br>868-77-9 | general<br>population | oral                 | Long term<br>exposure -<br>systemic effects     |                  | 0,83 mg/kg bw/day  |         |
| 2,6-di-tert-Butyl-p-cresol<br>128-37-0  | general<br>population | inhalation           | Long term<br>exposure -<br>systemic effects     |                  | 1,74 mg/m3         |         |
| 2,6-di-tert-Butyl-p-cresol<br>128-37-0  | worker                | dermal               | Long term<br>exposure -<br>systemic effects     |                  | 8,3 mg/kg bw/day   |         |
| 2,6-di-tert-Butyl-p-cresol<br>128-37-0  | general<br>population | dermal               | Long term<br>exposure -                         |                  | 5 mg/kg bw/day     |         |

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|                            |        | systemic effects |           |  |
|----------------------------|--------|------------------|-----------|--|
| 2,6-di-tert-Butyl-p-cresol | worker | Long term        | 5,8 mg/m3 |  |
| 128-37-0                   |        | exposure -       |           |  |
|                            |        | systemic effects |           |  |

#### **Biological Exposure Indices:**

None

#### 8.2. Exposure controls:

#### Respiratory protection:

Use only in well-ventilated areas.

#### 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:

Wear protective glasses.

#### Skin protection:

Wear suitable protective clothing.

# **SECTION 9: Physical and chemical properties**

#### 9.1. Information on basic physical and chemical properties

Appearance liquid light pink
Odor characteristic

Odour threshold No data available / Not applicable

pH No data available / Not applicable
Initial boiling point No data available / Not applicable

Flash point 10,00 °C (50 °F)

Decomposition temperature No data available / Not applicable Vapour pressure No data available / Not applicable No data available / Not applicable Density Bulk density 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 No data available / Not applicable Solubility (qualitative) Solidification temperature No data available / Not applicable Melting point No data available / Not applicable No data available / Not applicable Flammability No data available / Not applicable Auto-ignition temperature Explosive limits No data available / Not applicable No data available / Not applicable Partition coefficient: n-octanol/water No data available / Not applicable Evaporation rate No data available / Not applicable Vapor density Oxidising properties No data available / Not applicable

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No data available / Not applicable

# **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

Reaction with strong oxidants.

#### 10.2. Chemical stability

Stable under recommended storage conditions.

#### 10.3. Possibility of hazardous reactions

See section reactivity

#### 10.4. Conditions to avoid

Heat, flames, sparks and other sources of ignition.

#### 10.5. Incompatible materials

None if used properly.

# 10.6. Hazardous decomposition products

carbon oxides. nitrogen oxides

# **SECTION 11: Toxicological information**

# 11.1. Information on toxicological effects

#### General toxicological information:

The preparation is classified based on the conventional method outlined in Article 6(1)(a) of Directive 1999/45/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

#### Oral toxicity:

May cause irritation to the digestive tract.

# Inhalative toxicity:

Irritating to respiratory system

# Skin irritation:

Irritating to the skin.

# Eye irritation:

Risk of serious damage to eyes

### Sensitizing:

May cause sensitization by skin contact.

# Acute oral toxicity:

| Hazardous components CAS-No. | Value<br>type | Value       | Route of application | Exposure time | Species | Method                                      |
|------------------------------|---------------|-------------|----------------------|---------------|---------|---|
| Methacrylic acid<br>79-41-4  | LD50          | 1.320 mg/kg | oral                 |               | rat     | OECD Guideline 401 (Acute<br>Oral Toxicity) |
| Cumene hydroperoxide 80-15-9 | LD50          | 550 mg/kg   | oral                 |               | rat     |   |

# Acute inhalative toxicity:

| Hazardous components CAS-No. | Value<br>type | Value    | Route of application | Exposure time | Species | Method                    |
|------------------------------|---------------|----------|----------------------|---------------|---------|---------------------------|
| Methacrylic acid             | LC50          | 7,1 mg/l | inhalation           | 4 h           | rat     | OECD Guideline 403 (Acute |
| 79-41-4                      |               |          |                      |               |         | Inhalation Toxicity)      |

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# Acute dermal toxicity:

| Hazardous components CAS-No. | Value<br>type | Value                | Route of application | Exposure time | Species | Method |
|------------------------------|---------------|----------------------|----------------------|---------------|---------|--------|
| Methacrylic acid<br>79-41-4  | LD50          | 500 - 1.000<br>mg/kg | dermal               |               | rabbit  |        |
| Cumene hydroperoxide 80-15-9 | LD50          | 500 mg/kg            | dermal               |               | rat     |        |

# Skin corrosion/irritation:

| Hazardous components         | Result                  | Exposure | Species | Method  |
|------------------------------|-------------------------|----------|---------|---|
| CAS-No.                      |                         | time     |         |   |
| Methacrylic acid<br>79-41-4  | Category 1A (corrosive) | 4 h      | rabbit  | OECD Guideline 404 (Acute<br>Dermal Irritation / Corrosion) |
| Cumene hydroperoxide 80-15-9 | corrosive               |          | rabbit  |   |

# Respiratory or skin sensitization:

| Hazardous components CAS-No.   | Result          | Test type                                       | Species    | Method  |
|--------------------------------|-----------------|---|------------|---|
| Methyl methacrylate<br>80-62-6 | sensitising     | Mouse<br>local<br>lymphnod<br>e assay<br>(LLNA) | mouse      | OECD Guideline 429 (Skin<br>Sensitisation: Local Lymph<br>Node Assay) |
| Methacrylic acid<br>79-41-4    | not sensitising | Buehler<br>test                                 | guinea pig | OECD Guideline 406 (Skin Sensitisation)                               |

# Germ cell mutagenicity:

| Hazardous components CAS-No.               | Result   | Type of study /<br>Route of<br>administration          | Metabolic<br>activation /<br>Exposure time | Species | Method   |
|--|----------|--|--|---------|--|
| Methyl methacrylate 80-62-6                | negative | bacterial reverse<br>mutation assay (e.g<br>Ames test) | with and without                           |         |  |
| 2-Hydroxyethyl<br>methacrylate<br>868-77-9 | positive | in vitro mammalian<br>chromosome<br>aberration test    | with and without                           |         | OECD Guideline 473 (In vitro<br>Mammalian Chromosome<br>Aberration Test) |
|  | negative | bacterial reverse<br>mutation assay (e.g<br>Ames test) | with and without                           |         | OECD Guideline 471<br>(Bacterial Reverse Mutation<br>Assay)              |
| Cumene hydroperoxide 80-15-9               | positive | bacterial reverse<br>mutation assay (e.g<br>Ames test) | without                                    |         | OECD Guideline 471<br>(Bacterial Reverse Mutation<br>Assay)              |
| Cumene hydroperoxide 80-15-9               | negative | dermal   |  | mouse   |  |

# Repeated dose toxicity

| Hazardous components CAS-No.   | Result         | Route of application | Exposure time /<br>Frequency of<br>treatment | Species | Method |
|--------------------------------|----------------|----------------------|--|---------|--------|
| Methyl methacrylate<br>80-62-6 | NOAEL=1000 ppm | inhalation           | 14 weeks 6 hrs/day, 5 days/wk                | mouse   |        |

# **SECTION 12: Ecological information**

# General ecological information:

The preparation is classified based on the conventional method outlined in Article 6(1)(a) of Directive 1999/45/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

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# 12.1. Toxicity

# **Ecotoxicity:**

Harmful to aquatic organisms.

May cause long-term adverse effects in the aquatic environment.

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

| Hazardous components            | Value  | Value          | Acute             | Exposure | Species                                      | Method                                |
|---------------------------------|--------|----------------|-------------------|----------|--|---------------------------------------|
| CAS-No.                         | type   |                | Toxicity<br>Study | time     |  |                                       |
| Methyl methacrylate             | LC50   | 350 mg/l       | Fish              |          | Leuciscus idus                               | OECD Guideline                        |
| 80-62-6                         |        | -              |                   |          |  | 203 (Fish, Acute                      |
|                                 |        |                |                   |          |  | Toxicity Test)                        |
| Methyl methacrylate             | EC50   | 69 mg/l        | Daphnia           | 48 h     | Daphnia magna                                | OECD Guideline                        |
| 80-62-6                         |        |                |                   |          |  | 202 (Daphnia sp. Acute                |
|                                 |        |                |                   |          |  | Immobilisation                        |
|                                 |        |                |                   |          |  | Test)                                 |
| Methyl methacrylate             | EC50   | 170 mg/l       | Algae             | 4 d      | Selenastrum capricornutum                    | OECD Guideline                        |
| 80-62-6                         |        |                |                   |          | (new name: Pseudokirchnerella                | \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ |
| N 4 1: 11                       | 1.050  | 100 100 #      | F: 1              | 0.61     | subcapitata)                                 | Inhibition Test)                      |
| Methacrylic acid<br>79-41-4     | LC50   | 100 - 180 mg/l | Fish              | 96 h     | Brachydanio rerio (new name:<br>Danio rerio) | OECD Guideline<br>203 (Fish, Acute    |
| /9-41-4                         |        |                |                   |          | Danio rerio)                                 | Toxicity Test)                        |
| Methacrylic acid                | EC50   | > 130 mg/l     | Daphnia           | 48 h     | Daphnia magna                                | OECD Guideline                        |
| 79-41-4                         |        |                |                   |          |  | 202 (Daphnia sp.                      |
|                                 |        |                |                   |          |  | Acute                                 |
|                                 |        |                |                   |          |  | Immobilisation                        |
|                                 | F.G.50 | 0.0 "          |                   |          |  | Test)                                 |
| Methacrylic acid                | EC50   | > 8,2 mg/l     | Algae             |          |  | OECD Guideline                        |
| 79-41-4                         |        |                |                   |          |  | 201 (Alga, Growth Inhibition Test)    |
| Tetrahydrofurfuryl              | LC50   | 34,7 mg/l      | Fish              | 96 h     | Pimephales promelas                          | OECD Guideline                        |
| methacrylate                    | Leso   | 31,7 mg/1      | 11311             | ) o n    | 1 inteplicates prometas                      | 203 (Fish, Acute                      |
| 2455-24-5                       |        |                |                   |          |  | Toxicity Test)                        |
| 2-Hydroxyethyl methacrylate     | LC50   | 227 mg/l       | Fish              | 96 h     | Pimephales promelas                          | OECD Guideline                        |
| 868-77-9                        |        |                |                   |          |  | 203 (Fish, Acute                      |
|                                 | F.G.50 | 200 "          | <b>.</b>          | 40.1     | <b>.</b>                                     | Toxicity Test)                        |
| 2-Hydroxyethyl methacrylate     | EC50   | 380 mg/l       | Daphnia           | 48 h     | Daphnia magna                                | OECD Guideline                        |
| 868-77-9                        |        |                |                   |          |  | 202 (Daphnia sp. Acute                |
|                                 |        |                |                   |          |  | Immobilisation                        |
|                                 |        |                |                   |          |  | Test)                                 |
| 2-Hydroxyethyl methacrylate     | EC50   | 345 mg/l       | Algae             | 72 h     | Selenastrum capricornutum                    | OECD Guideline                        |
| 868-77-9                        |        | · ·            |                   |          | (new name: Pseudokirchnerella                | 201 (Alga, Growth                     |
|                                 |        |                |                   |          | subcapitata)                                 | Inhibition Test)                      |
| 2-Hydroxyethyl methacrylate     | NOEC   | 24,1 mg/l      | chronic           | 21 d     | Daphnia magna                                | OECD 211                              |
| 868-77-9                        |        |                | Daphnia           |          |  | (Daphnia magna,                       |
| Cumene hydroperoxide            | LC50   | 3,9 mg/l       | Fish              | 96 h     | Oncorhynchus mykiss                          | Reproduction Test)<br>OECD Guideline  |
| 80-15-9                         | LC30   | 3,9 mg/1       | 14811             | 90 II    | Oncomynenus mykiss                           | 203 (Fish, Acute                      |
| 00 13 7                         |        |                |                   |          |  | Toxicity Test)                        |
| Cumene hydroperoxide            | EC50   | 18 mg/l        | Daphnia           | 48 h     | Daphnia magna                                | OECD Guideline                        |
| 80-15-9                         |        | -              |                   |          |  | 202 (Daphnia sp.                      |
|                                 |        |                |                   |          |  | Acute                                 |
|                                 |        |                |                   |          |  | Immobilisation                        |
| Cumana hydronaravida            | ErC50  | 2.1 mg/l       | Algae             | 72 h     | Pseudokirchnerella subcapitata               | Test)<br>OECD Guideline               |
| Cumene hydroperoxide<br>80-15-9 | EICSU  | 3,1 mg/l       | Aigae             | /2 II    | Pseudokirchnerena subcapitata                | 201 (Alga, Growth                     |
| 80-13-7                         |        |                |                   |          |  | Inhibition Test)                      |
| 2,6-Di-tert-butyl-p-cresol      | LC0    | >= 0.57  mg/l  | Fish              | 96 h     | Brachydanio rerio (new name:                 | EU Method C.1                         |
| 128-37-0                        |        |                |                   |          | Danio rerio)                                 | (Acute Toxicity for                   |
|                                 |        |                |                   |          | ŕ  | Fish)                                 |
| 2,6-Di-tert-butyl-p-cresol      | EC50   | 0,48 mg/l      | Daphnia           | 48 h     | Daphnia magna                                | OECD Guideline                        |
| 128-37-0                        |        |                |                   |          |  | 202 (Daphnia sp.                      |
|                                 |        |                |                   |          |  | Acute                                 |
|                                 |        |                |                   |          |  | Immobilisation<br>Test)               |
| 2,6-Di-tert-butyl-p-cresol      | NOEC   | 0,316 mg/l     | chronic           | 21 d     | Daphnia magna                                | OECD 211                              |
| 128-37-0                        | HOLC   | 0,510 IIIg/I   | Daphnia           | 21 u     | Dapinia magna                                | (Daphnia magna,                       |
|                                 |        |                | p                 |          |  | Reproduction Test)                    |

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# 12.2. Persistence and degradability

# Persistence and Biodegradability:

The product is not biodegradable.

| Hazardous components<br>CAS-No.                 | Result                | Route of application | Degradability | Method  |
|---|-----------------------|----------------------|---------------|---|
| Methyl methacrylate<br>80-62-6                  | readily biodegradable | aerobic              | 95 %          | EU Method C.4-B (Determination of the "Ready" BiodegradabilityModified OECD Screening Test) |
| Methacrylic acid<br>79-41-4                     | readily biodegradable | aerobic              | 86 %          | OECD Guideline 301 D (Ready<br>Biodegradability: Closed Bottle<br>Test)                     |
| Tetrahydrofurfuryl<br>methacrylate<br>2455-24-5 |                       | aerobic              | 75 %          | OECD Guideline 301 F (Ready<br>Biodegradability: Manometric<br>Respirometry Test)           |
| 2-Hydroxyethyl methacrylate<br>868-77-9         | readily biodegradable | aerobic              | 98 %          | OECD Guideline 301 E (Ready<br>biodegradability: Modified OECD<br>Screening Test)           |
| Cumene hydroperoxide 80-15-9                    |                       |                      | 18 %          | OECD Guideline 301 E (Ready<br>biodegradability: Modified OECD<br>Screening Test)           |
| 2,6-Di-tert-butyl-p-cresol<br>128-37-0          |                       | aerobic              | 4,5 %         | OECD Guideline 301 C (Ready<br>Biodegradability: Modified MITI<br>Test (I))                 |

# 12.3. Bioaccumulative potential / 12.4. Mobility in soil

# Mobility:

Cured adhesives are immobile.

| Hazardous components CAS-No.                    | LogKow | Bioconcentration<br>factor (BCF) | Exposure time | Species     | Temperature | Method   |
|---|--------|----------------------------------|---------------|-------------|-------------|--|
| Methyl methacrylate 80-62-6                     | 1,38   |                                  |               |             |             |  |
| Methacrylic acid<br>79-41-4                     | 0,93   |                                  |               |             |             |  |
| Tetrahydrofurfuryl<br>methacrylate<br>2455-24-5 | 1,8    |                                  |               |             |             |  |
| Cumene hydroperoxide<br>80-15-9                 |        | 9,1                              |               | calculation |             | OECD Guideline 305<br>(Bioconcentration: Flow-<br>through Fish Test) |
| Cumene hydroperoxide 80-15-9                    | 2,16   |                                  |               |             |             |  |
| 2,6-Di-tert-butyl-p-cresol<br>128-37-0          | 5,1    |                                  |               |             |             |  |

# 12.5. Results of PBT and vPvB assessment

| Hazardous components        | PBT/vPvB   |
|-----------------------------|--|
| CAS-No.                     |  |
| Methyl methacrylate         | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very |
| 80-62-6                     | Bioaccumulative (vPvB) criteria.   |
| Methacrylic acid            | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very |
| 79-41-4                     | Bioaccumulative (vPvB) criteria.   |
| 2-Hydroxyethyl methacrylate | Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very |
| 868-77-9                    | Bioaccumulative (vPvB) criteria.   |
| 2,6-Di-tert-butyl-p-cresol  | Not fulfilling PBT (persistent/bioaccummulative/toxic) criteria                      |
| 128-37-0                    | *  |

# 12.6. Other adverse effects

No data available.

# **SECTION 13: Disposal considerations**

# 13.1. Waste treatment methods

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### Product disposal:

Dispose of in accordance with local and national regulations.

Contribution of this product to waste is very insignificant in comparison to article in which it is used

# Disposal of uncleaned packages:

After use, tubes, cartons and bottles containing residual product should be disposed of as chemically contaminated waste in an authorised legal land fill site or incinerated.

Disposal must be made according to official regulations.

#### 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

| ADR  | 1133 |
|------|------|
| RID  | 1133 |
| ADNR | 1133 |
| IMDG | 1133 |
| IATA | 1133 |

#### 14.2. UN proper shipping name

| ADR  | ADHESIVES |
|------|-----------|
| RID  | ADHESIVES |
| ADNR | ADHESIVES |
| IMDG | ADHESIVES |
| IATA | Adhesives |

# 14.3. Transport hazard class(es)

| ADR  | 3 |
|------|---|
|      | 3 |
| RID  | 3 |
|      | 3 |
| ADNR | 3 |
|      | 3 |
| IMDG | 3 |
|      | 3 |
| IATA | 3 |
|      | 3 |

# 14.4. Packaging group

| ADR  | II |
|------|----|
| RID  | II |
| ADNR | II |
| IMDG | II |
| IATA | II |

# 14.5. Environmental hazards

| ADR  | not applicable |
|------|----------------|
| RID  | not applicable |
| ADNR | not applicable |
| IMDG | not applicable |
| IATA | not applicable |
|      |                |

# 14.6. Special precautions for user

ADR Special provision 640D

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Tunnelcode: (D/E)
RID Special provision 640D
ADNR Special provision 640D
IMDG not applicable
IATA not applicable

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

not applicable

# **SECTION 15: Regulatory information**

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

VOC content 30 - 40 % (1999/13/EC)

# 15.2. Chemical safety assessment

A chemical safety assessment has not been carried out.

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# **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:

R11 Highly flammable.

R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

R21/22 Harmful in contact with skin and if swallowed.

R23 Toxic by inhalation.

R34 Causes burns.

R35 Causes severe burns.

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

R36/38 Irritating to eyes and skin.

R37/38 Irritating to respiratory system and skin.

R43 May cause sensitisation by skin contact.

R48/20/22 Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R7 May cause fire.

H225 Highly flammable liquid and vapor.

H242 Heating may cause a fire.

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.

H319 Causes serious eye irritation.

H331 Toxic if inhaled.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

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

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H411 Toxic to aquatic life with long lasting effects.

# **Further information:**

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.

This safety data sheet was prepared in accordance with Council Directive 67/548/EEC and it's subsequent amendments, and Commission Directive 1999/45/EC.