



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

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SDS No. : 168430  
V004.0

LOCTITE 222

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

#### 1.1. Product identifier

LOCTITE 222

#### Contains:

Cumene hydroperoxide

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

Intended use:

Anaerobic Adhesive

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

Henkel AG & Co. KGaA

Henkelstr. 67

40589 Düsseldorf

Germany

Phone: +49 (211) 797 0

Fax-no.: +49 (211) 798 4008

#### 1.4. Emergency telephone number

0800 202 202

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (CLP):

Serious eye irritation

Category 2

H319 Causes serious eye irritation.

Specific target organ toxicity - single exposure

Category 3

H335 May cause respiratory irritation.

Target organ: respiratory tract irritation

##### Classification (DPD):

Xi - Irritant

R36/37 Irritating to eyes and respiratory system.

#### 2.2. Label elements

##### Label elements (CLP):

Hazard pictogram:



|  |  |
|--|--|
| <b>Signal word:</b>                            | Warning  |
| <b>Hazard statement:</b>                       | H319 Causes serious eye irritation.<br>H335 May cause respiratory irritation.  |
| <b>Precautionary statement:</b>                | ***For consumer use only: P101 If medical advice is needed, have product container or label at hand. P102 Keep out of reach of children. P501 Dispose of waste and residues in accordance with local authority requirements*** |
| <b>Precautionary statement:<br/>Prevention</b> | P261 Avoid breathing vapours.  |
| <b>Precautionary statement:<br/>Response</b>   | P337+P313 If eye irritation persists: Get medical advice/attention.  |

**Label elements (DPD):**

Xi - Irritant



**Risk phrases:**

R36/37 Irritating to eyes and respiratory system.

**Safety phrases:**

S23 Do not breathe vapour.

S25 Avoid contact with eyes.

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

S51 Use only in well-ventilated areas.

**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.

**2.3. Other hazards**

None if used properly.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

**General chemical description:**

Product based on polyethylene glycol dimethacrylate.

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

| Hazardous components<br>CAS-No.     | EC Number<br>REACH-Reg No. | content         | Classification   |
|-------------------------------------|----------------------------|-----------------|--|
| Cumene hydroperoxide<br>80-15-9     | 201-254-7                  | 1 - < 2,5 %     | Acute Tox. 4; Dermal<br>H312<br>STOT RE 2<br>H373<br>Acute Tox. 4; Oral<br>H302<br>Org. Perox. E<br>H242<br>Acute Tox. 3; Inhalation<br>H331<br>Aquatic Chronic 2<br>H411<br>Skin Corr. 1B<br>H314   |
| N,N-Diethyl-p-toluidine<br>613-48-9 | 210-345-0                  | 0,1 - < 1 %     | Acute Tox. 3; Oral<br>H301<br>Acute Tox. 3; Dermal<br>H311<br>Acute Tox. 3; Inhalation<br>H331<br>STOT RE 2<br>H373<br>Aquatic Chronic 3<br>H412   |
| 1,4-Naphthalenedione<br>130-15-4    | 204-977-6                  | 100 - < 250 PPM | Acute Tox. 3; Oral<br>H301<br>Skin Irrit. 2; Dermal<br>H315<br>Skin Sens. 1; Dermal<br>H317<br>Eye Irrit. 2<br>H319<br>Acute Tox. 1; Inhalation<br>H330<br>STOT SE 3; Inhalation<br>H335<br>Aquatic Acute 1<br>H400<br>Aquatic Chronic 1<br>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.

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

| Hazardous components<br>CAS-No.     | EC Number<br>REACH-Reg No. | content         | Classification  |
|-------------------------------------|----------------------------|-----------------|---|
| Cumene hydroperoxide<br>80-15-9     | 201-254-7                  | 1 - < 2,5 %     | T - Toxic; R23<br>Xn - Harmful; R21/22, R48/20/22<br>C - Corrosive; R34<br>O - Oxidizing; R7<br>N - Dangerous for the environment; R51/53 |
| N,N-Diethyl-p-toluidine<br>613-48-9 | 210-345-0                  | 0,1 - < 1 %     | T - Toxic; R23/24/25<br>R33<br>R52/53   |
| Cumene<br>98-82-8                   | 202-704-5                  | 0,1 - < 1 %     | R10<br>Xn - Harmful; R65<br>Xi - Irritant; R37<br>N - Dangerous for the environment; R51/53   |
| 1,4-Naphthalenedione<br>130-15-4    | 204-977-6                  | 100 - < 250 PPM | T+ - Very toxic; R25, R26<br>Xi - Irritant; R36/37/38, R43<br>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:

Should not be a problem as product is of low volatility. However, if feeling unwell remove patient to fresh air.

#### Skin contact:

Rinse with running water and soap.  
Obtain medical attention if irritation persists.

#### Eye contact:

Rinse immediately with plenty of running water (for 10 minutes), seek medical attention from a specialist.

#### 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

EYE: Irritation, conjunctivitis.

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

Prolonged or repeated contact may cause skin irritation.

### 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.

#### 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), carbon dioxide (CO<sub>2</sub>) and nitrogen oxides (NO<sub>x</sub>) 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

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

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 section 8

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling**

Use only in well-ventilated areas.  
Gloves and safety glasses should be worn  
Prolonged or repeated skin contact should be avoided to minimise any risk of sensitisation.

**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**

Store in original containers at 8-21°C (46.4-69.8°F) and do not return residual materials to containers as contamination may reduce the shelf life of the bulk product.

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

Anaerobic Adhesive

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Occupational Exposure Limits**

Valid for  
South Africa

| Ingredient [Regulated substance]  | ppm | mg/m <sup>3</sup> | Value type                   | Short term exposure limit category / Remarks | Regulatory list |
|---|-----|-------------------|------------------------------|--|-----------------|
| Propane-1,2-diol<br>57-55-6<br>[PROPANE-1,2-DIOL, TOTAL (VAPOUR AND PARTICULATES)<br>PROPYLENE GLYCOL, TOTAL (VAPOUR AND PARTICULATES)] | 150 | 470               | Time Weighted Average (TWA): |  | ZA REL          |
| Propane-1,2-diol<br>57-55-6<br>[PROPYLENE GLYCOL, PARTICULATE<br>PROPANE-1,2-DIOL, PARTICULATES]  |     | 10                | Time Weighted Average (TWA): |  | ZA REL          |

**Biological Exposure Indices:**

None

**8.2. Exposure controls:****Respiratory protection:**

Ensure adequate ventilation.  
An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area  
Filter type: A

**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:

Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.

## Skin protection:

Wear suitable protective clothing.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

|  |                                    |
|--|------------------------------------|
| Appearance                             | liquid<br>purple                   |
| Odor                                   | characteristic                     |
| Odour threshold                        | No data available / Not applicable |
| pH                                     | 3,00 - 6,00                        |
| ( )                                    |                                    |
| Initial boiling point                  | > 150 °C (> 302 °F)                |
| Flash point                            | > 100 °C (> 212 °F)                |
| Decomposition temperature              | No data available / Not applicable |
| Vapour pressure                        | < 0,1300000 mbar                   |
| (25 °C (77 °F))                        |                                    |
| Vapour pressure                        | < 300 mbar                         |
| (50 °C (122 °F))                       |                                    |
| Density                                | 1,08 g/cm3                         |
| ( )                                    |                                    |
| 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 |
| Solubility (qualitative)               | Slight                             |
| (Solvent: Water)                       |                                    |
| Solubility (qualitative)               | Miscible                           |
| (Solvent: Acetone)                     |                                    |
| Solidification temperature             | No data available / Not applicable |
| Melting point                          | No data available / Not applicable |
| Flammability                           | No data available / Not applicable |
| Auto-ignition temperature              | No data available / Not applicable |
| Explosive limits                       | No data available / Not applicable |
| Partition coefficient: n-octanol/water | No data available / Not applicable |
| Evaporation rate                       | No data available / Not applicable |
| Vapor density                          | 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**

Peroxides.

**10.2. Chemical stability**

Stable under recommended storage conditions.

**10.3. Possibility of hazardous reactions**

See section reactivity

**10.4. Conditions to avoid**

Stable under normal conditions of storage and use.

**10.5. Incompatible materials**

See section reactivity

**10.6. Hazardous decomposition products**

Oxides of carbon.

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****General toxicological information:**

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

**STOT-single exposure:**

May cause respiratory irritation.

**Oral toxicity:**

May cause irritation to the digestive tract.

**Skin irritation:**

Although it is not a common sensitizer there may be a risk of sensitization on prolonged or repeated contact with damaged skin

**Eye irritation:**

Causes serious eye irritation.

**Acute oral toxicity:**

| Hazardous components<br>CAS-No. | Value<br>type | Value     | Route of<br>application | Exposure<br>time | Species | Method |
|---------------------------------|---------------|-----------|-------------------------|------------------|---------|--------|
| Cumene hydroperoxide<br>80-15-9 | LD50          | 550 mg/kg | oral                    |                  | rat     |        |

**Skin corrosion/irritation:**

| Hazardous components<br>CAS-No. | Result    | Exposure<br>time | Species | Method      |
|---------------------------------|-----------|------------------|---------|-------------|
| Cumene hydroperoxide<br>80-15-9 | corrosive |                  | rabbit  | Draize Test |

**Germ cell mutagenicity:**

| Hazardous components<br>CAS-No. | Result   | Type of study /<br>Route of<br>administration          | Metabolic<br>activation /<br>Exposure time | Species | Method  |
|---------------------------------|----------|--|--|---------|---|
| Cumene hydroperoxide<br>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<br>80-15-9 | negative | dermal   |  | mouse   |   |

**Repeated dose toxicity**

| Hazardous components<br>CAS-No. | Result | Route of<br>application | Exposure time /<br>Frequency of<br>treatment | Species | Method |
|---------------------------------|--------|-------------------------|--|---------|--------|
| Cumene hydroperoxide<br>80-15-9 |        | inhalation:<br>aerosol  | 6 h/d5 d/w                                   | rat     |        |

**SECTION 12: Ecological information****General ecological information:**

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

**12.1. Toxicity****Ecotoxicity:**

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

| Hazardous components<br>CAS-No.  | Value<br>type | Value      | Acute<br>Toxicity<br>Study | Exposure<br>time | Species                        | Method   |
|----------------------------------|---------------|------------|----------------------------|------------------|--------------------------------|--|
| Cumene hydroperoxide<br>80-15-9  | LC50          | 3,9 mg/l   | Fish                       | 96 h             | Oncorhynchus mykiss            | OECD Guideline<br>203 (Fish, Acute<br>Toxicity Test)                   |
| Cumene hydroperoxide<br>80-15-9  | EC50          | 18 mg/l    | Daphnia                    | 48 h             | Daphnia magna                  | OECD Guideline<br>202 (Daphnia sp.<br>Acute<br>Immobilisation<br>Test) |
| Cumene hydroperoxide<br>80-15-9  | ErC50         | 3,1 mg/l   | Algae                      | 72 h             | Pseudokirchnerella subcapitata | OECD Guideline<br>201 (Alga, Growth<br>Inhibition Test)                |
| Cumene hydroperoxide<br>80-15-9  | EC10          | 70 mg/l    | Bacteria                   | 30 min           |                                | DIN 38412, part 27<br>(Bacterial oxygen<br>consumption test)           |
| 1,4-Naphthalenedione<br>130-15-4 | EC50          | 0,011 mg/l | Algae                      | 72 h             | Dunaliella bioculata           | OECD Guideline<br>201 (Alga, Growth<br>Inhibition Test)                |

**12.2. Persistence and degradability****Persistence and Biodegradability:**

No data available for the product.

| Hazardous components<br>CAS-No.  | Result | Route of<br>application | Degradability | Method  |
|----------------------------------|--------|-------------------------|---------------|---|
| Cumene hydroperoxide<br>80-15-9  |        | no data                 | 0 %           | OECD Guideline 301 B (Ready<br>Biodegradability: CO2 Evolution<br>Test) |
| 1,4-Naphthalenedione<br>130-15-4 |        | no data                 | 0 - 60 %      | OECD 301 A - F  |

**12.3. Bioaccumulative potential / 12.4. Mobility in soil****Mobility:**

Cured adhesives are immobile.

**Bioaccumulative potential:**

No data available.

| Hazardous components<br>CAS-No.  | LogKow | Bioconcentration<br>factor (BCF) | Exposure<br>time | Species     | Temperature | Method   |
|----------------------------------|--------|----------------------------------|------------------|-------------|-------------|--|
| Cumene hydroperoxide<br>80-15-9  |        | 9,1                              |                  | calculation |             | OECD Guideline 305<br>(Bioconcentration: Flow-<br>through Fish Test) |
| Cumene hydroperoxide<br>80-15-9  | 2,16   |                                  |                  |             |             |  |
| 1,4-Naphthalenedione<br>130-15-4 | 1,71   |                                  |                  |             |             |  |

**12.5. Results of PBT and vPvB assessment**



No data available.

#### 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.

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

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  
(2010/75/EC)

< 3 %

#### 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:

R10 Flammable.  
R21/22 Harmful in contact with skin and if swallowed.  
R23 Toxic by inhalation.  
R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.  
R25 Toxic if swallowed.  
R26 Very toxic by inhalation.  
R33 Danger of cumulative effects.  
R34 Causes burns.  
R36/37/38 Irritating to eyes, respiratory system and skin.  
R37 Irritating to respiratory system.  
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.  
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R65 Harmful: may cause lung damage if swallowed.  
R7 May cause fire.  
H242 Heating may cause a fire.  
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.  
H319 Causes serious eye irritation.  
H330 Fatal if inhaled.  
H331 Toxic 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.  
H412 Harmful 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.

**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.**