



## Safety Data Sheet according to Regulation (EC) No1907/2006

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Loctite 221

SDS No. : 173033  
V003.2

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

#### 1.1. Product identifier

Loctite 221

#### Contains:

Cumene hydroperoxide

#### 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

Fax-no.: +44 1606 863762

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 (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

Chronic hazards to the aquatic environment

Category 3

H412 Harmful to aquatic life with long lasting effects.

**Classification (DPD):**

Xn - Harmful  
R20 Harmful by inhalation.  
Xi - Irritant  
R36/37 Irritating to eyes and respiratory system.  
Dangerous for the environment  
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**2.2. Label elements**

**Label elements (CLP):**

**Hazard pictogram:**



**Signal word:**

Warning

**Hazard statement:**

H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.  
H412 Harmful to aquatic life with long lasting effects.

**Precautionary statement:**

\*\*\*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\*\*\*

**Precautionary statement:  
Prevention**

P261 Avoid breathing vapours.  
P273 Avoid release to the environment.

**Precautionary statement:  
Response**

P337+P313 If eye irritation persists: Get medical advice/attention.

**Label elements (DPD):**

Xn - Harmful



**Risk phrases:**

R20 Harmful by inhalation.  
R36/37 Irritating to eyes and respiratory system.  
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**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.  
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:**

Cumene hydroperoxide,  
N,N-dimethyl-o-toluidine

**2.3. Other hazards**

None if used properly.

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

**General chemical description:**

Methacrylate resin based threadlocker

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

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Cumene hydroperoxide 80-15-9	201-254-7	> 1 - < 3 %	Acute toxicity 4; Dermal H312 Specific target organ toxicity - repeated exposure 2 H373 Acute toxicity 4; Oral H302 Organic peroxides E H242 Acute toxicity 3; Inhalation H331 Skin corrosion 1B H314 Chronic hazards to the aquatic environment 2 H411
N,N-dimethyl-o-toluidine 609-72-3	210-199-8	> 0,1 - < 0,9 %	Specific target organ toxicity - repeated exposure 2 H373 Chronic hazards to the aquatic environment 3 H412 Acute toxicity 3; Inhalation H331 Acute toxicity 3; Dermal H311 Acute toxicity 3; Oral H301

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 CAS-No.	EC Number REACH-Reg No.	content	Classification
Cumene hydroperoxide 80-15-9	201-254-7	> 1 - < 3 %	T - Toxic; R23 Xn - Harmful; R21/22, R48/20/22 C - Corrosive; R34 O - Oxidizing; R7 N - Dangerous for the environment; R51/53
Cumene 98-82-8	202-704-5	> 0,1 - < 1 %	R10 Xn - Harmful; R65 Xi - Irritant; R37 N - Dangerous for the environment; R51/53
N,N-dimethyl-o-toluidine 609-72-3	210-199-8	> 0,1 - < 0,9 %	T - Toxic; R23/24/25 R33 R52/53

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.  
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**

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

EYE: Irritation, conjunctivitis.

**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

**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 (CO<sub>2</sub>) can be released.

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

carbon oxides.

**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.

Ensure adequate ventilation.

**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 section 8

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling**

Use only in well-ventilated areas.

Avoid skin and eye contact.

See advice in section 8

Hygiene measures:

Good industrial hygiene practices should be observed.

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

**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)**  
Adhesive**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
CUMENE 98-82-8	50	250	Short Term Exposure Limit (STEL):		EH40 WEL
CUMENE 98-82-8			Skin designation:	Can be absorbed through the skin.	EH40 WEL
CUMENE 98-82-8	25	125	Time Weighted Average (TWA):		EH40 WEL
CUMENE 98-82-8	50	250	Short Term Exposure Limit (STEL):	Indicative	ECLTV
CUMENE 98-82-8	20	100	Time Weighted Average (TWA):	Indicative	ECLTV

**Biological Exposure Indices:**

None

**8.2. Exposure controls:**

## Respiratory protection:

Use only in well-ventilated areas.

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 &gt; 30 minutes permeation time as per EN 374):

nitrile rubber (NBR;  $\geq 0.4$  mm thickness)

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

nitrile rubber (NBR;  $\geq 0.4$  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

purple

Odor

characteristic

Odour threshold

No data available / Not applicable

pH	3,00 - 6,00
( )	
Initial boiling point	> 150,0 °C (> 302 °F)
Flash point	> 100 °C (> 212 °F); None
Decomposition temperature	No data available / Not applicable
Vapour pressure (25 °C (77 °F))	< 0,13 mbar
Density	1,0800 g/cm <sup>3</sup>
( )	
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) (Solvent: Water)	Not miscible
Solubility (qualitative) (Solvent: Acetone)	Miscible
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.

Reaction with strong bases

Reaction with strong acids.

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

No decomposition if stored and applied as directed.

### 10.5. Incompatible materials

See section reactivity

### 10.6. Hazardous decomposition products

carbon oxides.

## 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.

**Inhalative toxicity:**

May cause respiratory irritation.

**Skin irritation:**

Prolonged or repeated contact may cause skin irritation.

**Eye irritation:**

Causes serious eye irritation.

**Acute oral toxicity:**

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

**Skin corrosion/irritation:**

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Cumene hydroperoxide 80-15-9	corrosive		rabbit	

**Germ cell mutagenicity:**

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Cumene hydroperoxide 80-15-9	positive	bacterial reverse mutation assay (e.g Ames test)	without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Cumene hydroperoxide 80-15-9	negative	dermal		mouse	

## 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.  
Harmful to aquatic life with long lasting effects.

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Cumene hydroperoxide 80-15-9	LC50	3,9 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Cumene hydroperoxide 80-15-9	EC50	18 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Cumene hydroperoxide 80-15-9	ErC50	3,1 mg/l	Algae	72 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga. Growth Inhibition Test)

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

The product is not biodegradable.

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
Cumene hydroperoxide 80-15-9		no data	0 %	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)

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

Cured adhesives are immobile.

**Bioaccumulative potential:**

Does not bioaccumulate.

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

**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.

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, ADNR, IMDG, IATA-DGR.
- 14.2. UN proper shipping name**  
Not hazardous according to RID, ADR, ADNR, IMDG, IATA-DGR.
- 14.3. Transport hazard class(es)**  
Not hazardous according to RID, ADR, ADNR, IMDG, IATA-DGR.
- 14.4. Packaging group**  
Not hazardous according to RID, ADR, ADNR, IMDG, IATA-DGR.
- 14.5. Environmental hazards**  
Not hazardous according to RID, ADR, ADNR, IMDG, IATA-DGR.
- 14.6. Special precautions for user**  
Not hazardous according to RID, ADR, ADNR, IMDG, IATA-DGR.
- 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 < 3,00 %  
(1999/13/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:

- 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.
- R33 Danger of cumulative effects.
- R34 Causes burns.
- R37 Irritating to respiratory system.
- R48/20/22 Harmful: danger of serious damage to health by prolonged exposure through inhalation and if swallowed.
- 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.
- H331 Toxic if inhaled.
- H373 May cause damage to organs through prolonged or repeated exposure.
- 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.