



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

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LOCTITE CAT 23 LV

SDS No. : 390896  
V003.0

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Replaces version from: 30.06.2014

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

#### 1.1. Product identifier

LOCTITE CAT 23 LV

#### Contains:

3,3'-Oxybis(ethyleneoxy)bis(propylamine)  
Polyoxypropylene diamine

#### 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 Belgium N.V.  
Esplanade 1  
1020 Brussels

Belgium

Phone: +32 (2) 421 2711  
Fax-no.: +32 (2) 420 7025

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):

Skin corrosion Category 1B

H314 Causes severe skin burns and eye damage.

**Skin sensitizer** Category 1

**H317 May cause an allergic skin reaction.**

**Chronic hazards to the aquatic environment** Category 3

**H412 Harmful to aquatic life with long lasting effects.**

#### 2.2. Label elements

##### Label elements (CLP):

Hazard pictogram:



<b>Signal word:</b>	Danger
<b>Hazard statement:</b>	H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H412 Harmful to aquatic life with long lasting effects.
<b>Precautionary statement:</b>	P273 Avoid release to the environment.
<b>Prevention</b>	P280 Wear protective gloves/protective clothing/eye protection/face protection.
<b>Precautionary statement:</b>	P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
<b>Response</b>	P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 Immediately call a POISON CENTER or doctor. P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

### 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:

Hardener

#### Base substances of preparation:

organic amine

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

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Polyoxypropylene diamine 9046-10-0	01-2119557899-12	50- 100 %	Skin Corr. 1C H314 Aquatic Chronic 3 H412
3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	224-207-2 01-2119963377-26	25- 50 %	Skin Corr. 1B H314 Skin Sens. 1 H317

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:

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**

Causes burns.

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:**

water, carbon dioxide, foam, powder

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

High pressure waterjet

**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.

**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.

**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**

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**

Ensure good ventilation/extraction.

Keep container tightly sealed.

Refer to Technical Data Sheet

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

Adhesive

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

Valid for  
Great Britain

None

**Occupational Exposure Limits**

Valid for  
Ireland

None

**Predicted No-Effect Concentration (PNEC):**

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
Polypropylene glycol diamine 9046-10-0	aqua (freshwater)					0,015 mg/L	
Polypropylene glycol diamine 9046-10-0	aqua (marine water)					0,0143 mg/L	
Polypropylene glycol diamine 9046-10-0	aqua (intermittent releases)					0,15 mg/L	
Polypropylene glycol diamine 9046-10-0	sewage treatment plant (STP)					7,5 mg/L	
Polypropylene glycol diamine 9046-10-0	sediment (freshwater)				0,132 mg/kg		
Polypropylene glycol diamine 9046-10-0	sediment (marine water)				0,125 mg/kg		
Polypropylene glycol diamine 9046-10-0	oral				6,93 mg/kg		
Polypropylene glycol diamine 9046-10-0	soil				0,0176 mg/kg		
3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	aqua (freshwater)					0,22 mg/L	
3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	aqua (marine water)					0,022 mg/L	
3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	aqua (intermittent releases)					2,2 mg/L	
3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	sewage treatment plant (STP)					125 mg/L	
3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	sediment (freshwater)				1,1 mg/kg		
3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	sediment (marine water)				0,11 mg/kg		
3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	soil				0,091 mg/kg		

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

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Polypropylene glycol diamine 9046-10-0	Workers	dermal	Long term exposure - systemic effects		2,5 mg/kg bw/day	
Polypropylene glycol diamine 9046-10-0	Workers	dermal	Long term exposure - local effects		0,623 mg/cm <sup>2</sup>	
Polypropylene glycol diamine 9046-10-0	General population	dermal	Long term exposure - systemic effects		1,25 mg/kg bw/day	
Polypropylene glycol diamine 9046-10-0	General population	oral	Long term exposure - systemic effects		0,04 mg/kg bw/day	
Polypropylene glycol diamine 9046-10-0	General population	dermal	Long term exposure - local effects		0,311 mg/cm <sup>2</sup>	
3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	Workers	inhalation	Long term exposure - systemic effects		59 mg/m <sup>3</sup>	
3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	Workers	inhalation	Acute/short term exposure - systemic effects		176 mg/m <sup>3</sup>	
3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	Workers	inhalation	Long term exposure - local effects		13 mg/m <sup>3</sup>	
3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	Workers	dermal	Long term exposure - systemic effects		8,3 mg/kg bw/day	
3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	General population	inhalation	Long term exposure - systemic effects		17 mg/m <sup>3</sup>	
3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	General population	inhalation	Acute/short term exposure - systemic effects		52 mg/m <sup>3</sup>	
3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	General population	inhalation	Long term exposure - local effects		0,5 mg/m <sup>3</sup>	
3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	General population	inhalation	Acute/short term exposure - local effects		6,5 mg/m <sup>3</sup>	
3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	General population	dermal	Long term exposure - systemic effects		5 mg/kg bw/day	
3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	General population	oral	Long term exposure - systemic effects		5 mg/kg bw/day	

**Biological Exposure Indices:**

None

**8.2. Exposure controls:**

Engineering controls:

Ensure good ventilation/extraction.

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 (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;  $\geq 0.4$  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;  $\geq 0.4$  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:**

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

Protective eye equipment should conform to EN166.

**Skin protection:**

Wear suitable protective clothing.

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 properties**

Appearance	liquid Liquid Amber
Odor	Amine
Odour threshold	No data available / Not applicable
pH	No data available / Not applicable
Initial boiling point	> 160 °C (> 320 °F)
Flash point	> 93 °C (> 199.4 °F); Pensky Martens closed cup
Decomposition temperature	No data available / Not applicable
Vapour pressure (25 °C (77 °F))	< 0,01 mbar
Density	No data available / Not applicable
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)	Soluble
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**

Oxidizers.  
Acids.

**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**

None if used properly.

**10.6. Hazardous decomposition products**

Hydrocarbons  
carbon oxides.  
nitrogen 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 (EC) No 1272/2008. 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.

**Skin irritation:**

Causes severe skin burns and eye damage.

**Eye irritation:**

Avoid eye contact.  
Corrosive

**Sensitizing:**

May cause an allergic skin reaction.

**Acute oral toxicity:**

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Polyoxypropylene diamine 9046-10-0	LD50	2.885,3 mg/kg	oral		rat	not specified
3,3'- Oxybis(ethyleneoxy)bis(p ropylamine) 4246-51-9	LD50	3.160 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)

**Acute inhalative toxicity:**

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
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**Acute dermal toxicity:**

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Polyoxypropylene diamine 9046-10-0	LD50	2.979,7 mg/kg	dermal		rabbit	not specified
3,3'-Oxybis(ethyleneoxy)bis(p ropylamine) 4246-51-9	Acute toxicity estimate (ATE)	2.500 mg/kg	dermal			Expert judgement
3,3'-Oxybis(ethyleneoxy)bis(p ropylamine) 4246-51-9	LD50	> 2.150 mg/kg			rat	OECD Guideline 402 (Acute Dermal Toxicity)

**Skin corrosion/irritation:**

Hazardous components CAS-No.	Result	Exposure time	Species	Method
3,3'-Oxybis(ethyleneoxy)bis(p ropylamine) 4246-51-9	corrosive		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

**Germ cell mutagenicity:**

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
3,3'-Oxybis(ethyleneoxy)bis(p ropylamine) 4246-51-9	negative	in vitro mammalian cell micronucleus test	with and without		OECD Guideline 487 (In vitro Mammalian Cell Micronucleus Test)
	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)

**Reproductive toxicity:**

Hazardous substances CAS-No.	Result / Classification	Species	Exposure time	Species	Method
3,3'-Oxybis(ethyleneoxy)bis(p ropylamine) 4246-51-9	NOAEL P = 600 mg/kg	screening oral: gavage		rat	OECD Combined Repeated Dose and Reproductive / Developmental Toxicity Screening Test (Precursor Protocol of GL 422)

**Repeated dose toxicity**

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
3,3'-Oxybis(ethyleneoxy)bis(p ropylamine) 4246-51-9	NOAEL=< 100 mg/kg	oral: gavage	59 daysdaily	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

**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 (EC) No 1272/2008. 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
Polyoxypropylene diamine 9046-10-0	LC50	772,14 mg/l	Fish	96 h	Cyprinodon variegatus	OECD Guideline 203 (Fish, Acute Toxicity Test)
Polyoxypropylene diamine 9046-10-0	EC50	80 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Polyoxypropylene diamine 9046-10-0	EC10	1,4 mg/l	Algae	72 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
	EC50	15 mg/l	Algae	72 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
3,3'- Oxybis(ethyleneoxy)bis(propy lamine) 4246-51-9	LC50	> 215 - 464 mg/l	Fish	96 h	Leuciscus idus	DIN 38412-15
3,3'- Oxybis(ethyleneoxy)bis(propy lamine) 4246-51-9	EC50	218 mg/l	Daphnia	48 h	Daphnia magna	EU Method C.2 (Acute Toxicity for Daphnia)
3,3'- Oxybis(ethyleneoxy)bis(propy lamine) 4246-51-9	EC50	666 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	DIN 38412-09
	NOEC	15,6 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	DIN 38412-09
3,3'- Oxybis(ethyleneoxy)bis(propy lamine) 4246-51-9	EC10	152,5 mg/l	Bacteria	17 h	Pseudomonas putida	DIN 38412, part 8 (Pseudomonas Zellvermehrungshe mm-Test)

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

The product is not biodegradable.

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
Polyoxypropylene diamine 9046-10-0		aerobic	0 %	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
3,3'- Oxybis(ethyleneoxy)bis(propy lamine) 4246-51-9	not inherently biodegradable	aerobic	< 20 %	OECD Guideline 302 B (Inherent biodegradability: Zahn- Wellens/EMPA Test)
	Not readily biodegradable.	aerobic	0 %	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)

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

No data available for the product.

**Bioaccumulative potential:**

No data available.

Hazardous components CAS-No.	LogPow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
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3,3'- Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	-1,25				25 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
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### 12.5. Results of PBT and vPvB assessment

Hazardous components CAS-No.	PBT/vPvB
Polyoxypropylene diamine 9046-10-0	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
3,3'-Oxybis(ethyleneoxy)bis(propylamine) 4246-51-9	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:

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

Dispose of in accordance with local and national regulations.

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**

ADR	2735
RID	2735
ADN	2735
IMDG	2735
IATA	2735

**14.2. UN proper shipping name**

ADR	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (Polyoxy propylene diamine,3,3'-oxybis(ethyleneoxy)bis(propylamine))
RID	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (Polyoxy propylene diamine,3,3'-oxybis(ethyleneoxy)bis(propylamine))
ADN	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (Polyoxy propylene diamine,3,3'-oxybis(ethyleneoxy)bis(propylamine))
IMDG	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (Polyoxy propylene diamine,3,3'-oxybis(ethyleneoxy)bis(propylamine))
IATA	Polyamines, liquid, corrosive, n.o.s. (Polyoxy propylene diamine,3,3'-oxybis(ethyleneoxy)bis(propylamine))

**14.3. Transport hazard class(es)**

ADR	8
RID	8
ADN	8
IMDG	8
IATA	8

**14.4. Packing group**

ADR	II
RID	II
ADN	II
IMDG	II
IATA	II

**14.5. Environmental hazards**

ADR	not applicable
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

**14.6. Special precautions for user**

ADR	not applicable Tunnelcode: (E)
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

**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 &lt; 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:

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

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.**