

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

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Loctite 329

sds no. : 173032 V002.1 Revision: 17.06.2011 printing date: 18.04.2012

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

Product identifier: Loctite 329 Relevant identified uses of the substance or mixture and uses advised against: Intended use: Acrylics

Details of the supplier of the safety data sheet:

Henkel Ireland Limited Product Safety & Regulatory Affairs Tallaght Business Park, Whitestown Dublin 24

Ireland

Phone:	+353 (14046444)
Fax-no.:	+353 (14519926)

ua-productsafety.uk@uk.henkel.com

Emergency telephone number:

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

SECTION 2: Hazards identification

Classification of the substance or mixture:

Classification (DPD): F - Highly flammable R11 Highly flammable. Sensitizing R43 May cause sensitisation by skin contact. Xi - Irritant R37/38 Irritating to respiratory system and skin.

Label elements (DPD):

F - Highly flammable

Xi - Irritant





Risk phrases:

R11 Highly flammable. R41 Risk of serious damage to eyes. R37/38 Irritating to respiratory system and skin. R43 May cause sensitisation by skin contact.

Safety phrases:

S9 Keep container in a well-ventilated place.

S16 Keep away from sources of ignition - No smoking.

S23 Do not breathe vapour.

S24/25 Avoid contact with skin and eyes.

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

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

Additional labeling:

Contains epoxy constituents. See information supplied by the manufacturer.

Contains:

Methyl methacrylate, Methacrylic acid, Bisphenol-A epichlorhydrin resin MW <= 700

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 A of two part adhesive

Declaration of the ingredients accord	ing to CLP	(EC) No 12	272/2008:
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Hazardous components	EC Number	content	Classification
CAS-No.	REACH-Reg No.		
Methyl methacrylate 80-62-6	201-297-1	40- 60 %	Flammable liquids 2 H225
			Skin sensitizer 1
			H317
			Skin irritation 2
			H315
			Specific target organ toxicity - single
			exposure 3
			H335
Methacrylic acid	201-204-4	5- 10 %	Acute toxicity 4; Oral
79-41-4			H302
			Skin corrosion 1A
			H314
			Acute toxicity 4; Dermal
			H312
Bisphenol-A epichlorhydrin resin MW <=	500-033-5	1- 5%	Chronic hazards to the aquatic environment 2
700			H411
25068-38-6			Serious eye irritation 2
			H319
			Skin irritation 2
			H315
			Skin sensitizer 1
			H317
Cumene hydroperoxide	201-254-7	0,1- 1 %	Acute toxicity 4; Dermal
80-15-9			H312
			Specific target organ toxicity - repeated
			exposure 2
			H373
			Acute toxicity 3; Inhalation
			H331
			Acute toxicity 4; Oral
			H302
			Organic peroxides E
			H242
			Chronic hazards to the aquatic environment 2
			H411
			Skin corrosion 1B
			H314

Only dangerous ingredients for which a CLP classification is already available are displayed in this table. 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
Methyl methacrylate	201-297-1	40 - 60 %	Xi - Irritant; R37/38
80-62-6			R43 F - Highly flammable; R11
Methacrylic acid 79-41-4	201-204-4	5 - 10 %	C - Corrosive; R35 Xn - Harmful; R21/22
Bisphenol-A epichlorhydrin resin MW <= 700 25068-38-6	500-033-5	1 - 5 %	N - Dangerous for the environment; R51, R53 R43 Xi - Irritant; R36/38
Cumene hydroperoxide 80-15-9	201-254-7	0,1 - 1 %	T - Toxic; R23 Xn - Harmful; R21/22, R48/20/22 O - Oxidizing; R7 C - Corrosive; R34 N - Dangerous for the environment; R51, R53

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

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.

Most important symptoms and effects, both acute and delayed:

SKIN: Rash, Urticaria.

Indication of any immediate medical attention and special treatment needed:

See section: Description of first aid measures

SECTION 5: Firefighting measures

Combustion behaviour:

Solvent containing flammable product. In case of fire toxic gases are released. In case of fire toxic / flammable gases can be released.

Extinguishing media:

Suitable extinguishing media: Carbon dioxide, foam, powder

Extinguishing media which must not be used for safety reasons:

None known

Special hazards arising from the substance or mixture:

None

Trace amounts of toxic and/or irritating fumes may be released and the use of breathing apparatus is recommended.

Advice for firefighters:

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

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures: Avoid skin and eye contact.

Environmental precautions:

Do not let product enter drains.

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.

Reference to other sections:

See advice in chapter 8

SECTION 7: Handling and storage

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.

Hygiene measures:

Good industrial hygiene practices should be observed.

Conditions for safe storage, including any incompatibilities:

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

Specific end use(s):

Acrylics

SECTION 8: Exposure controls/personal protection

Control parameters:

Valid for

Great Britain

Ingredient	ppm	mg/m ³	Туре	Category	Remarks
METHYL METHACRYLATE	50	208	Time Weighted Average		EH40 WEL
80-62-6			(TWA):		
METHYL METHACRYLATE	100	416	Short Term Exposure		EH40 WEL
80-62-6			Limit (STEL):		
METHACRYLIC ACID	40	143	Short Term Exposure		EH40 WEL
79-41-4			Limit (STEL):		
METHACRYLIC ACID	20	72	Time Weighted Average		EH40 WEL
79-41-4			(TWA):		

Valid for

Great Britain

Basis

UK EH40 WELs

Ingredient	ppm	mg/m3	Туре	Category	Remarks
METHACRYLIC ACID	40	143	Short Term Exposure		EH40 WEL
79-41-4			Limit (STEL):		
METHACRYLIC ACID	20	72	Time Weighted Average		EH40 WEL
79-41-4			(TWA):		
CUMENE	25	125	Time Weighted Average		EH40 WEL
98-82-8			(TWA):		
CUMENE	50	250	Short Term Exposure		EH40 WEL
98-82-8			Limit (STEL):		
CUMENE			Skin designation:	Can be absorbed through the	EH40 WEL
98-82-8			-	skin.	
CUMENE			Skin designation:	Can be absorbed through the	ECTLV
98-82-8			-	skin.	
CUMENE	50	250	Short Term Exposure	Indicative	ECTLV
98-82-8			Limit (STEL):		
CUMENE	20	100	Time Weighted Average	Indicative	ECTLV
98-82-8			(TWA):		
METHYL METHACRYLATE	50	208	Time Weighted Average		EH40 WEL
80-62-6			(TWA):		
METHYL METHACRYLATE	100	416	Short Term Exposure		EH40 WEL
80-62-6			Limit (STEL):		

Exposure controls:

Respiratory protection: Use only in well-ventilated areas.

Hand protection:

The use of chemical resistant gloves such as Nitrile are recommended.

Please note that in practice the working life of chemical resistant gloves may be considerably reduced as a result of many influencing factors (e.g. temperature). Suitable risk assessment should be carried out by the end user. If signs of wear and tear are noticed then the gloves should be replaced.

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

Information on basic physical and chemical properties:

Appearance	liquid clear to slightly cloudy
	colourless
Odor	Mild
pH	Not determined
Initial boiling point	101 °C (213.8 °F)
Flash point	12 °C (53.6 °F)
Decomposition temperature	No data available / Not applicable
Vapour pressure	< 52 mbar
(20 °C (68 °F))	
Density	1,05 - 1,1 g/cm3
0	
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)	Not miscible
(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
-	

Other information:

No data available / Not applicable

SECTION 10: Stability and reactivity

Chemical stability:

Stable under recommended storage conditions.

Possibility of hazardous reactions:

See section reactivity

Conditions to avoid:

Stable under normal conditions of storage and use.

Hazardous decomposition products:

carbon oxides.

SECTION 11: Toxicological information

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. May cause sensitization by skin contact.

Eye irritation:

The product may cause serious eye damage. Avoid eye contact.

Acute toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Methacrylic acid 79-41-4	LC50	7,1 mg/l	inhalation	4 h	rat	
Cumene hydroperoxide 80-15-9	LD50 LC50 LD50	550 mg/kg 220 ppm 500 mg/kg	oral inhalation dermal	4 h	rat rat rat	

Skin corrosion/irritation:

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

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
Methacrylic acid 79-41-4	not sensitising	Buehler test	guinea pig	

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Methyl methacrylate 80-62-6	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		
Bisphenol-A epichlorhydrin resin MW <= 700 25068-38-6	positive	bacterial reverse mutation assay (e.g Ames test)	with and without		
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	

Repeated dose toxicity

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

SECTION 12: Ecological information

General ecological information:

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

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.

Toxicity:

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Methyl methacrylate 80-62-6	LC50	350 mg/l	Fish		Leuciscus idus	OECD Guideline 203 (Fish, Acute
Methyl methacrylate 80-62-6	EC50	69 mg/l	Daphnia	48 h	Daphnia magna	Toxicity Test) OECD Guideline 202 (Daphnia sp. Acute Immobilisation
Methyl methacrylate 80-62-6	EC50	170 mg/l	Algae	4 d	Selenastrum capricornutum (new name: Pseudokirchnerella	Test) OECD Guideline 201 (Alga, Growth
Methacrylic acid 79-41-4	LC50	100 - 180 mg/l	Fish	96 h	subcapitata) Brachydanio rerio (new name: Danio rerio)	Inhibition Test) OECD Guideline 203 (Fish, Acute
Methacrylic acid 79-41-4	EC50	> 130 mg/l	Daphnia	48 h	Daphnia magna	Toxicity Test) OECD Guideline 202 (Daphnia sp. Acute
Methacrylic acid 79-41-4	EC50	> 8,2 mg/l	Algae			Immobilisation Test) OECD Guideline 201 (Alga, Growth
Cumene hydroperoxide 80-15-9	LC50	3,9 mg/l	Fish	96 h	Oncorhynchus mykiss	Inhibition Test) OECD Guideline 203 (Fish, Acute
Cumene hydroperoxide 80-15-9	EC50	18 mg/l	Daphnia	48 h	Daphnia magna	Toxicity Test) OECD Guideline 202 (Daphnia sp.
Cumene hydroperoxide 80-15-9	ErC50	3,1 mg/l	Algae	72 h	Pseudokirchnerella subcapitata	Acute Immobilisation Test) OECD Guideline 201 (Alga, Growth Inhibition Test)

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
Methyl methacrylate 80-62-6	readily biodegradable	aerobic	95 %	EU Method C.4-B (Determination of the "Ready" BiodegradabilityModified OECD Screening Test)
Methacrylic acid 79-41-4	readily biodegradable	aerobic	86 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
Cumene hydroperoxide 80-15-9			18 %	OECD Guideline 301 E (Ready biodegradability: Modified OECD Screening Test)

Bioaccumulative potential / Mobility in soil:

Hazardous components CAS-No.	LogKow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
Methyl methacrylate 80-62-6	1,38					
Methacrylic acid 79-41-4	0,93					
Cumene hydroperoxide 80-15-9		9,1				OECD Guideline 305 (Bioconcentration: Flow- through Fish Test)
Cumene hydroperoxide 80-15-9	2,16					

SECTION 13: Disposal considerations

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

SECTION 14: Transport information

Road transport ADR:

Class: Packaging group: Classification code: Hazard ident. number: UN no.: Label: Technical name: Tunnelcode: Additional information:	3 II F1 33 1133 3 ADHESIVES (D/E) Special provision 640D
Railroad transport RID: Class:	3
Packaging group:	II
Classification code:	F1
Hazard ident. number:	33
UN no.:	1133
Label:	3
Technical name:	ADHESIVES
Tunnelcode:	
Additional information:	Special provision 640D

Inland water transport ADN:

Class:	3
Packaging group:	II
Classification code:	F1
Hazard ident. number:	
UN no.:	1133
Label:	3
Technical name:	ADHESIVES
Additional information:	Special provision 640D
Marine transport IMDG:	
Class:	3
Packaging group:	Π
UN no.:	1133
Label:	3
EmS:	F-E ,S-D
Seawater pollutant:	-
Proper shipping name:	ADHESIVES
Air transport IATA:	
Class:	3
Packaging group:	II
Packaging instructions (passenger)	353
Packaging instructions (cargo)	364
UN no.:	1133
Label:	3
Proper shipping name:	Adhesives

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture:

VOC content

30 - 35 % (As defined in the Council Directive 2004/42/EC)

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.

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

R23 Toxic by inhalation.

R34 Causes burns.

R35 Causes severe burns.

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.

R51 Toxic to aquatic organisms.

R53 May cause long-term adverse effects in the aquatic environment.

R7 May cause fire.

H225 Highly flammable liquid and vapour.

H242 Heating may cause a fire.

H302 Harmful if swallowed.

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.

H335 May cause respiratory irritation.

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

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.