



Safety Data Sheet in compliance with Indian Manufacture, Storage and Import of Hazardous Chemical (Amendment) Rules, 2000

LOCTITE 545 HYDRAULIC SEALANT known as Loctite 545 250 ml

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SDS No. : 153648

V001.5

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

Product identifier

LOCTITE 545 HYDRAULIC SEALANT known as Loctite 545 250 ml

Material: 1719103

Relevant identified uses of the substance or mixture and uses advised against

Intended use:

Anaerobic Sealant

Identification of manufacturer, importer or distributor:

Henkel Adhesives Tech. India Pvt Ltd.

L&T Seawoods, Grand Central 401, B Wing, 4th Floor, Tower 1

Seawoods

400706 Navi Mumbai, Maharashtra

India

Phone: +91 022-7130-1112

Fax-no.: +91 022-7130-1400

Emergency telephone number

In case of any emergency call Poison Information Centre, JSS Hospital, Mysore: 24x7 Helpline No: +916363539153/ Toll Free No: 18004250207/ Mobile: +91 9901218640.

SECTION 2: Hazards identification

Classification of the substance or mixture

Classification (DPD):

Xn - Harmful

R20 Harmful by inhalation.

Xi - Irritant

R43 May cause sensitisation by skin contact.

Xi - Irritant

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

Label elements

Label elements (DPD):**Risk phrases:**

R20 Harmful by inhalation.
R36/37/38 Irritating to eyes, respiratory system and skin.
R43 May cause sensitisation by skin contact.

Safety phrases:

S24 Avoid contact with skin.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S37 Wear suitable gloves.
S60 This material and its container must be disposed of as hazardous waste.

SECTION 3: Composition/information on ingredients**Declaration of ingredients according to DPD (EC) No 1999/45:**

Hazardous components CAS-No.	EC Number	content	Classification
2-Hydroxyethyl methacrylate 868-77-9	212-782-2	$\geq 1 - \leq 25 \%$	Xi - Irritant; R36/38, R43
Cumene hydroperoxide 80-15-9	201-254-7	$\geq 1 - \leq 10 \%$	T - Toxic; R23 Xn - Harmful; R21/22, R48/20/22 C - Corrosive; R34 O - Oxidizing; R7 N - Dangerous for the environment; R51/53
N,N-Diethyl-p-toluidine 613-48-9	210-345-0	$\geq 0,1 - \leq 5 \%$	T - Toxic; R23/24/25 R33 R52/53
Acetic acid, 2-phenylhydrazide 114-83-0	204-055-3	$\geq 0,1 - \leq 5 \%$	Xn - Harmful; R22, R40 Xi - Irritant; R36/37/38, R43
maleic acid 110-16-7	203-742-5	$\geq 0,1 - \leq 5 \%$	Xn - Harmful; R21/22 Xi - Irritant; R36/37/38, R43
N,N-dimethyl-o-toluidine 609-72-3	210-199-8	$\geq 0,1 - \leq 5 \%$	T - Toxic; R23/24/25 R33 R52/53
2-phenylpropan-2-ol 617-94-7	210-539-5	$\geq 0,01 - \leq 5 \%$	Xi - Irritant; R36/38 Xn - Harmful; R22

**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**Inhalation:**

Move to fresh air.
If not breathing, give artificial respiration.
If breathing is difficult, give oxygen.
If symptoms develop and persist, get medical attention.

Skin contact:

Remove contaminated clothing and footwear.
Wash with soap and water.
If symptoms develop and persist, get medical attention.
Wash clothing before reuse.

Eye contact:

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

Ingestion: Do not induce vomiting.
Keep individual calm.
Get medical attention.

Section 5. Fire fighting measures

Suitable extinguishing media: Water spray (fog), foam, dry chemical or carbon dioxide.

Improper extinguishing media: None known

Specific hazards arising from the chemical: Uncontrolled polymerization may occur at high temperatures resulting in explosions or rupture of storage containers.

Special protection equipment and precautions for firefighters: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. In case of fire, keep containers cool with water spray.

Hazardous combustion products: Oxides of carbon.
Oxides of sulfur.
Oxides of nitrogen.
Irritating organic vapours.
Phenolics.

Section 6. Accidental release measures

Personal precautions: Avoid skin and eye contact.
Ensure adequate ventilation.
Wear protective equipment.

Environmental precautions: Do not empty into drains / surface water / ground water.

Clean-up methods: Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Store in a partly filled, closed container until disposal.
Dispose of contaminated material as waste according to Section 13.

SECTION 7: Handling and storage

Precautions for safe handling

Use only in well-ventilated areas.
Prolonged or repeated skin contact should be avoided to minimise any risk of sensitisation.
Avoid skin and eye contact.

Conditions for safe storage, including any incompatibilities

730 d
Keep container in a well ventilated place.

Section 8. Exposure controls / personal protection

Ingredient [Regulated substance]	Value type	ppm	mg/m ³	Remarks
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Respiratory protection:	An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area Ensure adequate ventilation. 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.
Body protection:	Wear suitable protective clothing.
Engineering controls:	Ensure good ventilation/extraction.
Hygienic measures:	Keep away from food, beverages and animal feed. Wash hands before work breaks and after finishing work. Do not eat, drink or smoke while working. Good industrial hygiene practices should be observed.

SECTION 9: Physical and chemical properties

Appearance:	Purple
Odor:	Liquid mild
Odor threshold (CA):	No data available.
pH:	Not applicable, Product is non-polar/aprotic.
Melting point / freezing point:	Not available.
Specific gravity:	1,02
Boiling point:	> 150 °C (> 302 °F)
Flash point: (Tagliabue closed cup)	> 93 °C (> 199.4 °F)
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Lower explosive limit:	No data available.
Upper explosive limit:	No data available.
Vapor pressure: (; 27 °C (80.6 °F); 20 °C (68 °F))	< 5 mm hg < 0,13 mbar
Vapor density:	> 1
Density:	1,02 g/cm ³
Solubility:	Solvent: Water, Slight
Partition coefficient: n-octanol/water:	No data available.
Auto ignition:	Not available.
Decomposition temperature:	
Viscosity:	No data available.
VOC content:	1,99 % 19,01 g/l

Section 10. Stability and reactivity**Reactivity/Incompatible materials:**

Strong oxidizing agents.
Reducing agents.
Acids.
Bases.
Rust.
Zinc.
Aluminum.
Iron.
copper
Alkalis.
Aldehydes.
Amines.
Free radical initiators.
Peroxides.
None if used properly.

Chemical stability:

Stable under recommended storage conditions.

Possibility of hazardous reactions:

Will not occur.

Conditions to avoid:

Exposure to sunlight.
Heat, flames, sparks and other sources of ignition.
See "Handling and Storage" (Section 7) and "Incompatibility" (Section 10).

Hazardous decomposition products:

Oxides of carbon.
Oxides of sulfur.
Oxides of nitrogen.
Phenolics.
Irritating organic vapours.

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

No experimental toxicological data on the preparation as such is available.

Acute oral toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
2-Hydroxyethyl methacrylate 868-77-9	LD50	5.564 mg/kg	oral		rat	FDA Guideline
Cumene hydroperoxide 80-15-9	LD50	382 mg/kg	oral		rat	other guideline:
N,N-Diethyl-p-toluidine 613-48-9	Acute toxicity estimate (ATE)	100 mg/kg	oral			Expert judgement
Acetic acid, 2- phenylhydrazide 114-83-0	LD50	270 mg/kg	oral		rat	not specified
maleic acid 110-16-7	LD50	708 mg/kg	oral		rat	not specified
2-phenylpropan-2-ol 617-94-7	LD50	1.300 mg/kg	oral		rat	not specified

Acute inhalative toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Cumene hydroperoxide 80-15-9	LC50	1,370 mg/l	inhalation	4 h	rat	not specified
N,N-Diethyl-p-toluidine 613-48-9	Acute toxicity estimate (ATE)	3 mg/l	inhalation			Expert judgement

Acute dermal toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
2-Hydroxyethyl methacrylate 868-77-9	LD50	> 5.000 mg/kg	dermal		rabbit	not specified
Cumene hydroperoxide 80-15-9	Acute toxicity estimate (ATE)	1.100 mg/kg	dermal			Expert judgement
N,N-Diethyl-p-toluidine 613-48-9	Acute toxicity estimate (ATE)	300 mg/kg	dermal			Expert judgement
maleic acid 110-16-7	LD50	1.560 mg/kg	dermal		rabbit	not specified
2-phenylpropan-2-ol 617-94-7	LD50	4.300 mg/kg	dermal		rabbit	not specified

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
2-Hydroxyethyl methacrylate 868-77-9	slightly irritating	24 h	rabbit	Draize Test
Cumene hydroperoxide 80-15-9	corrosive		rabbit	Draize Test
N,N-Diethyl-p-toluidine 613-48-9	irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
maleic acid 110-16-7	irritating	24 h	human	Patch Test

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
2-Hydroxyethyl methacrylate 868-77-9	Category 2B (mildly irritating to eyes)		rabbit	Draize Test
maleic acid 110-16-7	highly irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
2-Hydroxyethyl methacrylate 868-77-9	not sensitising	Buehler test	guinea pig	Buehler test
2-Hydroxyethyl methacrylate 868-77-9	sensitising	Guinea pig maximisation test	guinea pig	Magnusson and Kligman Method
maleic acid 110-16-7	sensitising	Mouse local lymph node assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
maleic acid 110-16-7	sensitising	Mouse local lymph node assay (LLNA)	guinea pig	OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
2-Hydroxyethyl methacrylate 868-77-9	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
	positive	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
2-Hydroxyethyl methacrylate 868-77-9	negative	oral: gavage		rat	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
	negative	oral: gavage		Drosophila melanogaster	not specified
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	not specified
maleic acid 110-16-7	negative	bacterial reverse mutation assay (e.g Ames test)	no data		Ames Test
	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)

Carcinogenicity:

Hazardous components CAS-No.	Result	Species	Sex	Exposure time Frequency of treatment	Route of application	Method
2-Hydroxyethyl methacrylate 868-77-9	not carcinogenic	rat	female	2 y 6 h/d, 5 d/w	inhalation	equivalent or similar OECD Guideline 451 (Carcinogenicity Studies)
2-Hydroxyethyl methacrylate 868-77-9	not carcinogenic	rat	male	2 y 6 h/d, 5 d/w	inhalation	equivalent or similar OECD Guideline 451 (Carcinogenicity Studies)
maleic acid 110-16-7	not carcinogenic	rat	male/female	2 y daily	oral: feed	OECD Guideline 451 (Carcinogenicity Studies)

Repeated dose toxicity

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
2-Hydroxyethyl methacrylate 868-77-9	NOAEL=100 mg/kg	oral: gavage	49 ddaily	rat	OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
2-Hydroxyethyl methacrylate 868-77-9	NOAEL=0,352 mg/l	inhalation	90 d6 h/d, 5 d/w	rat	OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day)
Cumene hydroperoxide 80-15-9		inhalation: aerosol	6 h/d5 d/w	rat	not specified
maleic acid 110-16-7	NOAEL= $\geq$ 40 mg/kg	oral: feed	90 ddaily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

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

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

Toxicity

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
2-Hydroxyethyl methacrylate 868-77-9	LC50	> 100 mg/l	Fish	96 h	Oryzias latipes	OECD Guideline 203 (Fish, Acute Toxicity Test)
2-Hydroxyethyl methacrylate 868-77-9	EC50	380 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
2-Hydroxyethyl methacrylate 868-77-9	EC50	836 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
	NOEC	400 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchneriella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
2-Hydroxyethyl methacrylate 868-77-9	EC0	> 3.000 mg/l	Bacteria	16 h	Pseudomonas fluorescens	other guideline:
2-Hydroxyethyl methacrylate 868-77-9	NOEC	24,1 mg/l	chronic Daphnia	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
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	18,84 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Cumene hydroperoxide 80-15-9	EC50	3,1 mg/l	Algae	72 h	Desmodesmus subspicatus (reported as Scenedesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
	NOEC	1 mg/l	Algae	72 h	Desmodesmus subspicatus (reported as Scenedesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Cumene hydroperoxide 80-15-9	EC10	70 mg/l	Bacteria	30 min	not specified	not specified
N,N-Diethyl-p-toluidine 613-48-9	LC50	42,25 mg/l	Fish	96 h	Danio rerio	OECD Guideline 203 (Fish, Acute Toxicity Test)
N,N-Diethyl-p-toluidine 613-48-9	EC50	35,2 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
N,N-Diethyl-p-toluidine 613-48-9	EC50	7,42 mg/l	Algae	72 h	Desmodesmus subspicatus	OECD Guideline 201 (Alga, Growth Inhibition Test)
maleic acid 110-16-7	LC50	> 245 mg/l	Fish	48 h	Leuciscus idus	DIN 38412-15
maleic acid 110-16-7	EC50	42,81 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
maleic acid 110-16-7	EC50	74,35 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
	EC10	11,8 mg/l	Algae	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
maleic acid 110-16-7	EC10	44,6 mg/l	Bacteria	18 h	Pseudomonas putida	DIN 38412, part 8 (Pseudomonas Zellvermehrungshe- mm-Test)
maleic acid 110-16-7	NOEC	10 mg/l	chronic Daphnia	21 d	Daphnia magna	other guideline:
N,N-dimethyl-o-toluidine 609-72-3	LC 50	46 mg/l	Fish	96 h	Fathead minnow (Pimephales promelas)	

Persistence and degradability

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
2-Hydroxyethyl methacrylate 868-77-9	readily biodegradable	aerobic	92 - 100 %	OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I))
Cumene hydroperoxide 80-15-9	not readily biodegradable.	aerobic	3 %	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
N,N-Diethyl-p-toluidine 613-48-9	not readily biodegradable.	not specified	1 %	other guideline:
maleic acid 110-16-7	readily biodegradable	aerobic	97,08 %	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
N,N-dimethyl-o-toluidine 609-72-3	not readily biodegradable.		1 %	other guideline:

Bioaccumulative potential / Mobility in soil

Hazardous components CAS-No.	LogPow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
2-Hydroxyethyl methacrylate 868-77-9	0,42				25 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
Cumene hydroperoxide 80-15-9		9,1		calculation		OECD Guideline 305 (Bioconcentration: Flow-through Fish Test)
Cumene hydroperoxide 80-15-9	1,6				25 °C	OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
N,N-Diethyl-p-toluidine 613-48-9	3,7					QSAR (Quantitative Structure Activity Relationship)
Acetic acid, 2-phenylhydrazide 114-83-0	0,74					not specified
maleic acid 110-16-7	-1,3				20 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)
2-phenylpropan-2-ol 617-94-7	1,95					not specified

Results of PBT and vPvB assessment

Hazardous components CAS-No.	PBT/vPvB
2-Hydroxyethyl methacrylate 868-77-9	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Cumene hydroperoxide 80-15-9	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
maleic acid 110-16-7	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
2-phenylpropan-2-ol 617-94-7	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

Section 13. Disposal considerations

Waste disposal of product: Dispose of in accordance with local and national regulations.

Disposal for uncleaned package: Dispose of in accordance with local and national regulations.

Section 14. Transport information

Road transport ADR:

Not dangerous goods

Railroad transport RID:

Not dangerous goods

Inland water transport ADN:

Not dangerous goods

Marine transport IMDG:

Not dangerous goods

Air transport IATA:

Not dangerous goods

Section 15. Regulations - classification and identification

maleic acid American Cleaning Institute (ACI) Cleaning Product Ingredient Inventory
No reference to national Indian legislation is to be made, as there are no hazardous ingredient present.

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:

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

R22 Harmful 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.

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

R36/38 Irritating to eyes and skin.

R40 Limited evidence of a carcinogenic effect.

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.

R51/53 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.

R7 May cause fire.

Further information:

Dear Customer,

Henkel is committed to creating a sustainable future by promoting opportunities along the entire value chain. If you would like to contribute by switching from a paper to the electronic version of SDS, please contact the local Customer Service representative.

We recommend to use a non-personal email address (e.g. SDS@your_company.com).

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.

Disclaimer:

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.

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