



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

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LOCTITE 3609

SDS No. : 153602  
V005.0

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Replaces version from: 24.09.2013

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

#### 1.1. Product identifier

LOCTITE 3609

#### Contains:

Epoxy resin (number average molecular weight  $\leq$  700)  
1,3-Isobenzofurandione, reaction products with diethylenetriamine  
Dipropylene glycol diglycidyl ether  
Diethylenetriamine

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

Intended use:  
Epoxy adhesive

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

Henkel Westerlo  
AE Belgium  
Nijverheidsstraat 7  
2260 Westerlo

Belgium

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):

Acute toxicity	Category 4
H302 Harmful if swallowed.	
Route of Exposure: Oral	
Skin irritation	Category 2
H315 Causes skin irritation.	
Serious eye irritation	Category 2
H319 Causes serious eye irritation.	
Skin sensitizer	Category 1
H317 May cause an allergic skin reaction.	
Chronic hazards to the aquatic environment	Category 2
H411 Toxic to aquatic life with long lasting effects.	

#### 2.2. Label elements

Label elements (CLP):

**Hazard pictogram:**



**Signal word:**

Warning

**Hazard statement:**

H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H411 Toxic to aquatic life with long lasting effects.

**Precautionary statement:**  
**Prevention**

P273 Avoid release to the environment.  
P280 Wear protective gloves.

**Precautionary statement:**  
**Response**

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
P337+P313 If eye irritation persists: Get medical advice/attention.  
P302+P352 IF ON SKIN: Wash with plenty of water.

### 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:**

Epoxy resin

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

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Epoxy resin (number average molecular weight $\leq$ 700) 25068-38-6	500-033-5 500-033-5 01-2119456619-26	20- 40 %	Skin Irrit. 2 H315 Skin Sens. 1 H317 Eye Irrit. 2 H319 Aquatic Chronic 2 H411
1,3-Isobenzofurandione, reaction products with diethylenetriamine	01-2120096580-52	20- 40 %	Acute Tox. 4; Oral H302 Aquatic Chronic 2 H411
Dipropylene glycol diglycidyl ether 41638-13-5		20- 40 %	Skin Irrit. 2; Dermal H315 Skin Sens. 1; Dermal H317 Eye Irrit. 2 H319 Aquatic Chronic 3 H412
Diethylenetriamine 111-40-0	203-865-4 01-2119473793-27	1- < 5 %	Acute Tox. 4; Oral H302 Acute Tox. 4; Dermal H312 Skin Corr. 1B H314 Skin Sens. 1 H317 Acute Tox. 2; Inhalation H330 STOT SE 3 H335

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:**

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:**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Seek medical advice.

**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.

SKIN: Redness, inflammation.

SKIN: Rash, Urticaria.

INGESTION: Nausea, vomiting, diarrhea, abdominal pain.

#### 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), 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

Avoid skin and eye contact.

#### 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.

Wash spillage site thoroughly with soap and water or detergent solution.

#### 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.

Prolonged or repeated skin contact should be avoided to minimise any risk of sensitisation.

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

For optimum shelf life store in original containers under refrigerated conditions at 2 - 8°C (35.6 - 46.4 °F)

**7.3. Specific end use(s)**  
Epoxy adhesive**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Occupational Exposure Limits**Valid for  
Great Britain

Ingredient [Regulated substance]	ppm	mg/m <sup>3</sup>	Value type	Short term exposure limit category / Remarks	Regulatory list
2,2'-Iminodi(ethylamine) 111-40-0 [2,2'-IMINODI(ETHYLAMINE)]			Skin designation:	Can be absorbed through the skin.	EH40 WEL
2,2'-Iminodi(ethylamine) 111-40-0 [2,2'-IMINODI(ETHYLAMINE)]	1	4,3	Time Weighted Average (TWA):		EH40 WEL

**Occupational Exposure Limits**Valid for  
Ireland

Ingredient [Regulated substance]	ppm	mg/m <sup>3</sup>	Value type	Short term exposure limit category / Remarks	Regulatory list
2,2'-Iminodi(ethylamine) 111-40-0 [DIETHYLENE TRIAMINE]	1	4	Time Weighted Average (TWA):		IR_OEL
2,2'-Iminodi(ethylamine) 111-40-0 [DIETHYLENE TRIAMINE]			Skin designation:	Can be absorbed through the skin.	IR_OEL

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

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	aqua (freshwater)					0,006 mg/L	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	aqua (marine water)					0,001 mg/L	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	aqua (intermittent releases)					0,018 mg/L	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	sewage treatment plant (STP)					10 mg/L	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	sediment (freshwater)					0,996 mg/kg	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	sediment (marine water)					0,1 mg/kg	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	soil					0,196 mg/kg	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	oral					11 mg/kg food	
1,3-Isobenzofurandione, reaction products with diethylenetriamine	aqua (freshwater)					0,0026 mg/L	
1,3-Isobenzofurandione, reaction products with diethylenetriamine	aqua (marine water)					0,00026 mg/L	
1,3-Isobenzofurandione, reaction products with diethylenetriamine	aqua (intermittent releases)					0,026 mg/L	
1,3-Isobenzofurandione, reaction products with diethylenetriamine	sewage treatment plant (STP)					10 mg/L	
1,3-Isobenzofurandione, reaction products with diethylenetriamine	sediment (freshwater)					0,014 mg/kg	
1,3-Isobenzofurandione, reaction products with diethylenetriamine	sediment (marine water)					0,0014 mg/kg	
2,2'-Iminodi(ethylamine) 111-40-0	aqua (freshwater)					0,56 mg/L	
2,2'-Iminodi(ethylamine) 111-40-0	aqua (marine water)					0,056 mg/L	
2,2'-Iminodi(ethylamine) 111-40-0	aqua (intermittent releases)					0,32 mg/L	
2,2'-Iminodi(ethylamine) 111-40-0	sediment (freshwater)					1072 mg/kg	
2,2'-Iminodi(ethylamine) 111-40-0	sediment (marine water)					107,2 mg/kg	
2,2'-Iminodi(ethylamine) 111-40-0	sewage treatment plant (STP)					6 mg/L	
2,2'-Iminodi(ethylamine) 111-40-0	soil					7,97 mg/kg	
2,2'-Iminodi(ethylamine) 111-40-0	Air						

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

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	Workers	dermal	Acute/short term exposure - systemic effects		8,33 mg/kg bw/day	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	Workers	Inhalation	Acute/short term exposure - systemic effects		12,25 mg/m3	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	Workers	dermal	Long term exposure - systemic effects		8,33 mg/kg bw/day	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	Workers	Inhalation	Long term exposure - systemic effects		12,25 mg/m3	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	General population	dermal	Acute/short term exposure - systemic effects		3,571 mg/kg bw/day	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	General population	dermal	Long term exposure - systemic effects		3,571 mg/kg bw/day	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	General population	Inhalation	Acute/short term exposure - systemic effects		0,75 mg/m3	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	General population	Inhalation	Long term exposure - systemic effects		0,75 mg/m3	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	General population	oral	Acute/short term exposure - systemic effects		0,75 mg/kg bw/day	
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	General population	oral	Long term exposure - systemic effects		0,75 mg/kg bw/day	
1,3-Isobenzofurandione, reaction products with diethylenetriamine	Workers	inhalation	Long term exposure - systemic effects		11,7 mg/m3	
1,3-Isobenzofurandione, reaction products with diethylenetriamine	Workers	dermal	Long term exposure - systemic effects		33,3 mg/kg	
2,2'-Iminodi(ethylamine) 111-40-0	Workers	dermal	Long term exposure - systemic effects		11,4 mg/kg	
2,2'-Iminodi(ethylamine) 111-40-0	Workers	dermal	Long term exposure - local effects		1,1 mg/kg	
2,2'-Iminodi(ethylamine) 111-40-0	Workers	Inhalation	Acute/short term exposure - systemic effects		92,1 mg/m3	
2,2'-Iminodi(ethylamine) 111-40-0	Workers	Inhalation	Acute/short term exposure - local effects		2,6 mg/m3	
2,2'-Iminodi(ethylamine) 111-40-0	Workers	Inhalation	Long term exposure - systemic effects		15,4 mg/m3	
2,2'-Iminodi(ethylamine) 111-40-0	Workers	Inhalation	Long term exposure - local effects		0,87 mg/m3	
2,2'-Iminodi(ethylamine) 111-40-0	General population	dermal	Acute/short term exposure - local effects		4,88 mg/kg	
2,2'-Iminodi(ethylamine) 111-40-0	General population	Inhalation	Acute/short term exposure - systemic effects		27,5 mg/m3	
2,2'-Iminodi(ethylamine)	General	dermal	Long term		4,88 mg/kg	

111-40-0	population		exposure - systemic effects			
2,2'-Iminodi(ethylamine) 111-40-0	General population	Inhalation	Long term exposure - systemic effects		4,6 mg/m3	

**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 (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 &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.

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	gel viscous dark red
Odor	mild
Odour threshold	No data available / Not applicable
pH	No data available / Not applicable
Initial boiling point	> 93 °C (> 199.4 °F)
Flash point	> 93 °C (> 199.4 °F); Tagliabue closed cup
Decomposition temperature	No data available / Not applicable
Vapour pressure (20 °C (68 °F))	6,67 mbar
Density ( $\rho$ )	1,1 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
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

Reaction with strong acids.  
Reacts 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

Stable under normal conditions of storage and use.  
Protect from direct sunlight.

### 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 (EC) No 1272/2008. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

#### Oral toxicity:

Harmful if swallowed.

#### Skin irritation:

Causes skin irritation.

#### Eye irritation:

Causes serious eye irritation.

#### Sensitizing:

May cause an allergic skin reaction.

**Acute oral toxicity:**

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	LD50	> 2.000 mg/kg	oral		rat	OECD Guideline 420 (Acute Oral Toxicity)
1,3-Isobenzofurandione, reaction products with diethylenetriamine	LD50	> 1.000 - < 3.000 mg/kg	oral		rat	not specified
Dipropylene glycol diglycidyl ether 41638-13-5	LD50	> 2.000 mg/kg	oral		rat	
Diethylenetriamine 111-40-0	LD50	1.553 mg/kg	oral		rat	not specified

**Acute inhalative toxicity:**

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Diethylenetriamine 111-40-0	NOEL	0,07 mg/l			rat	OECD Guideline 403 (Acute Inhalation Toxicity)

**Acute dermal toxicity:**

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	LD50	> 2.000 mg/kg	dermal		rat	not specified
1,3-Isobenzofurandione, reaction products with diethylenetriamine	LD50	> 3.000 mg/kg	dermal		rabbit	OECD Guideline 402 (Acute Dermal Toxicity)
Dipropylene glycol diglycidyl ether 41638-13-5	LD50	> 2.000 mg/kg	dermal		rabbit	
Diethylenetriamine 111-40-0	LD50	1.045 mg/kg	dermal		rabbit	not specified

**Skin corrosion/irritation:**

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	moderately irritating	24 h	rabbit	Draize Test
Diethylenetriamine 111-40-0	corrosive	15 min	rabbit	BASF Test

**Serious eye damage/irritation:**

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Diethylenetriamine 111-40-0	corrosive	30 s	rabbit	not specified

**Respiratory or skin sensitization:**

Hazardous components CAS-No.	Result	Test type	Species	Method
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Diethylenetriamine 111-40-0	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)

**Germ cell mutagenicity:**

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 472 (Genetic Toxicology: Escherichia coli, Reverse Mutation Assay)
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	negative	oral: gavage		mouse	not specified
Diethylenetriamine 111-40-0	positive	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
	negative	in vitro mammalian chromosome aberration test	with and without		Chromosome Aberration Test
Diethylenetriamine 111-40-0	negative	oral: gavage		mouse	OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test)
	negative	oral: gavage		mouse	not specified

**Carcinogenicity:**

Hazardous components CAS-No.	Result	Species	Sex	Exposure time Frequency of treatment	Route of application	Method
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	not carcinogenic	mouse	male	2 y daily	dermal	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	not carcinogenic	rat	male/female	2 y daily	oral: gavage	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
Diethylenetriamine 111-40-0	not carcinogenic	mouse	male	lifetime (appr. 587 d) 3 d/w	dermal	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

**Reproductive toxicity:**

Hazardous substances CAS-No.	Result / Classification	Species	Exposure time	Species	Method
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	NOAEL P = >= 50 mg/kg NOAEL F1 = >= 750 mg/kg NOAEL F2 = >= 750 mg/kg	Two generation study oral: gavage	238 d	rat	OECD Guideline 416 (Two- Generation Reproduction Toxicity Study)
Diethylenetriamine 111-40-0	NOAEL P = 100 mg/kg NOAEL F1 = 30 mg/kg	screening oral: gavage	29-54 d	rat	OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test)

**Repeated dose toxicity**

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	NOAEL=50 mg/kg	oral: gavage	14 wdaily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Diethylenetriamine 111-40-0	NOAEL=70 - 80 mg/kg	oral: feed	90 ddaily	rat	not specified
Diethylenetriamine 111-40-0	NOAEL=0,55 mg/l	inhalation: vapour	15 d6 h/d	rat	not specified

**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:**

Toxic to aquatic life with long lasting effects.

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

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	LC50	1,75 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	EC50	9,4 mg/l	Algae	72 h	Scenedesmus capricornutum	OECD Guideline 201 (Alga, Growth Inhibition Test)
	NOEC	2,4 mg/l	Algae	72 h	Scenedesmus capricornutum	OECD Guideline 201 (Alga, Growth Inhibition Test)
Epoxy resin (number average molecular weight ≤ 700) 25068-38-6	NOEC	0,3 mg/l	chronic Daphnia	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
1,3-Isobenzofurandione, reaction products with diethylenetriamine	LC50	2,7 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
1,3-Isobenzofurandione, reaction products with diethylenetriamine	EC50	> 100 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
1,3-Isobenzofurandione, reaction products with diethylenetriamine	EC50	2,6 mg/l	Algae	72 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
	NOEC	1 mg/l	Algae	72 h	Pseudokirchnerella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
1,3-Isobenzofurandione, reaction products with diethylenetriamine	EC50	1.000 mg/l	Bacteria	3 h	activated sludge of a predominantly domestic sewage	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Dipropylene glycol diglycidyl ether 41638-13-5	LC50	67 mg/l	Fish		Leuciscus idus	OECD Guideline 203 (Fish, Acute Toxicity Test)
Dipropylene glycol diglycidyl ether 41638-13-5	EC50	90 mg/l	Daphnia		Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Diethylenetriamine 111-40-0	LC50	430 mg/l	Fish	96 h	Poecilia reticulata	EU Method C.1 (Acute Toxicity for Fish)
	NOEC	> 10 mg/l	Fish	28 d	Gasterosteus aculeatus	OECD Guideline 210 (fish early lite stage toxicity test)
Diethylenetriamine 111-40-0	EC50	64,6 mg/l	Daphnia	48 h	Daphnia magna	EU Method C.2 (Acute Toxicity for Daphnia)
Diethylenetriamine 111-40-0	EC50	1.164 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
	NOEC	10 mg/l	Algae	72 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Diethylenetriamine 111-40-0	NOEC	6 mg/l	Bacteria	3 h	anaerobic bacteria	not specified
Diethylenetriamine 111-40-0	NOEC	5,6 mg/l	chronic Daphnia	21 d	Daphnia magna	EU Method C.20 (Daphnia magna Reproduction Test)

## 12.2. Persistence and degradability

### Persistence and Biodegradability:

The product is not biodegradable.

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
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Epoxy resin (number average molecular weight $\leq$ 700) 25068-38-6		aerobic	5 %	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
1,3-Isobenzofurandione, reaction products with diethylenetriamine	Not readily biodegradable.	aerobic	25 %	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
	inherently biodegradable	aerobic	91 %	OECD Guideline 302 B (Inherent biodegradability: Zahn-Wellens/EMPA Test)
Dipropylene glycol diglycidyl ether 41638-13-5			8 - 27 %	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
Diethylenetriamine 111-40-0	inherently biodegradable	aerobic	83 %	EU Method C.9 (Biodegradation: Zahn-Wellens Test)
	readily biodegradable	aerobic	87 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)

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

Cured adhesives are immobile.

**Bioaccumulative potential:**

No data available.

Hazardous components CAS-No.	LogPow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
Diethylenetriamine 111-40-0		> 0,3 - < 6,3	42 d	Cyprinus carpio		OECD Guideline 305 C (Bioaccumulation: Test for the Degree of Bioconcentration in Fish)
Diethylenetriamine 111-40-0	-1,58				20 °C	QSAR (Quantitative Structure Activity Relationship)

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

Hazardous components CAS-No.	PBT/vPvB
Epoxy resin (number average molecular weight $\leq$ 700) 25068-38-6	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
1,3-Isobenzofurandione, reaction products with diethylenetriamine	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Dipropylene glycol diglycidyl ether 41638-13-5	Not fulfilling PBT (persistent/bioaccumulative/toxic) criteria
Diethylenetriamine 111-40-0	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:**

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.

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**

ADR	3082
RID	3082
ADN	3082
IMDG	3082
IATA	3082

**14.2. UN proper shipping name**

ADR	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A Epichlorhydrin resin)
RID	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A Epichlorhydrin resin)
ADN	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A Epichlorhydrin resin)
IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A Epichlorhydrin resin)
IATA	Environmentally hazardous substance, liquid, n.o.s. (Bisphenol-A Epichlorhydrin resin)

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

ADR	9
RID	9
ADN	9
IMDG	9
IATA	9

**14.4. Packing group**

ADR	III
RID	III
ADN	III
IMDG	III
IATA	III

**14.5. Environmental hazards**

ADR	not applicable
RID	not applicable
ADN	not applicable
IMDG	Marine pollutant
IATA	not applicable

**14.6. Special precautions for user**

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

The transport classifications in this section apply generally to packed and bulk goods alike. For containers with a net volume of no more than 5 L for liquid substances or a net mass of no more than 5 kg for solid substances per individual or inner package, the exemptions SP 375 (ADR), 197 (IATA), 969 (IMDG) may be applied, which can result in a deviation from the transport classification for packed goods.

**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 < 3,00 %  
(2010/75/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:

- 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.
- H330 Fatal if inhaled.
- H335 May cause respiratory irritation.
- 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.

### Label elements (DPD):

Xi - Irritant

N - Dangerous for the environment



### Risk phrases:

- R36/38 Irritating to eyes and skin.
- R43 May cause sensitisation by skin contact.
- R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### Safety phrases:

- S24 Avoid contact with skin.
- S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S28 After contact with skin, wash immediately with plenty of water and soap.
- S37 Wear suitable gloves.
- 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:

- Dipropylene glycol diglycidyl ether,
- Epoxy resin (number average molecular weight  $\leq 700$ ),
- Diethylenetriamine

**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.**