



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

Page 1 of 20

LOCTITE ABLESTIK 144A

SDS No. : 373903

V005.0

Revision: 30.07.2024

printing date: 20.09.2024

Replaces version from: 10.05.2022

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

#### 1.1. Product identifier

LOCTITE ABLESTIK 144A

UFI: NSQ1-1X5D-320C-3MGC

#### 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 Ltd

Adhesives

Wood Lane End

HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 (1442) 278000

SDSinfo.Adhesive@henkel.com

For Safety Data Sheet updates please visit our website [www.mysds.henkel.com](http://www.mysds.henkel.com) or [www.henkel-adhesives.com](http://www.henkel-adhesives.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 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.	
Carcinogenicity	Category 2
H351 Suspected of causing cancer.	
Acute hazards to the aquatic environment	Category 1
H400 Very toxic to aquatic life.	
Chronic hazards to the aquatic environment	Category 1
H410 Very toxic to aquatic life with long lasting effects.	

#### 2.2. Label elements

##### Label elements (CLP):

**Hazard pictogram:**



**Contains**

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane

Bisphenol-F epichlorhydrin resin; MW<700  
diuron

**Signal word:**

Warning

**Hazard statement:**

H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H351 Suspected of causing cancer.  
H410 Very toxic to aquatic life with long lasting effects.

**Precautionary statement:  
Prevention**

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

**Precautionary statement:  
Response**

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

**2.3. Other hazards**

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.  
None if used properly.

**Following substances are present in a concentration  $\geq$  the concentration limit for depiction in Section 3 and fulfill the criteria for PBT/vPvB, or were identified as endocrine disruptor (ED):**

This mixture does not contain any substances in a concentration  $\geq$  the concentration limit for depiction in Section 3 that are assessed to be a PBT, vPvB or ED.

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

**3.2. Mixtures**

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

Hazardous components CAS-No. EC Number REACH-Reg No.	Concentration	Classification	Specific Conc. Limits, M-factors and ATEs	Add. Information
2,2'-(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane 1675-54-3 01-2119456619-26	25- < 50 %	Eye Irrit. 2, H319 Aquatic Chronic 2, H411 Skin Sens. 1, H317 Skin Irrit. 2, H315	Eye Irrit. 2; H319; C >= 5 % Skin Irrit. 2; H315; C >= 5 %	
Bisphenol-F epichlorhydrin resin; MW<700 ----- 01-2119454392-40	1- < 5 %	Skin Irrit. 2, Dermal, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411		
diuron 330-54-1 206-354-4 01-2119517622-45	2,5- < 25 %	Aquatic Chronic 1, H410 Aquatic Acute 1, H400 STOT RE 2, H373 Acute Tox. 4, Oral, H302 Carc. 2, H351	M acute = 10 M chronic = 10 ===== oral:ATE = 1.000 mg/kg inhalation:ATE = 5,051 mg/l;dust/mist	
Quartz (SiO <sub>2</sub> ), <1% respirable 14808-60-7 238-878-4	1- < 5 %			

If no ATE values are displayed, please refer to LD/LC50 values in Section 11.  
For full text of the H - statements and other abbreviations see section 16 "Other information".

**SECTION 4: First aid measures****4.1. Description of first aid measures****Inhalation:**

Move to fresh air. If symptoms persist, seek medical advice.

**Skin contact:**

Rinse with running water and soap.

Obtain medical attention if irritation persists.

**Eye contact:**

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

**Ingestion:**

Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

**4.2. Most important symptoms and effects, both acute and delayed**

EYE: Irritation, conjunctivitis.

SKIN: Redness, inflammation.

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), 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 contact with skin and eyes.

Wear protective equipment.

Ensure adequate ventilation.

Avoid dust formation.

#### **6.2. Environmental precautions**

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

#### **6.3. Methods and material for containment and cleaning up**

Dispose of contaminated material as waste according to Section 13.

Scrape up as much material as possible.

Sweep up spilled material. Avoid creating dust.

Store in a partly filled, closed container until 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:**

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

Good industrial hygiene practices should be observed.

#### **7.2. Conditions for safe storage, including any incompatibilities**

Ensure good ventilation/extraction.

Keep container tightly sealed.

Keep refrigerated.

Refer to Technical Data Sheet.

#### **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

<b>Ingredient [Regulated substance]</b>	<b>ppm</b>	<b>mg/m<sup>3</sup></b>	<b>Value type</b>	<b>Short term exposure limit category / Remarks</b>	<b>Regulatory list</b>
Diuron 330-54-1 [DIURON (ISO)]		10	Time Weighted Average (TWA):		EH40 WEL
Quartz (SiO <sub>2</sub> ) 14808-60-7 [SILICA, RESPIRABLE CRYSTALLINE]		0,1	Time Weighted Average (TWA):		EH40 WEL
Quartz (SiO <sub>2</sub> ) 14808-60-7 [RESPIRABLE CRYSTALLINE SILICA DUST]		0,1	Time Weighted Average (TWA):		EU OELIII

**Occupational Exposure Limits**Valid for  
Ireland

<b>Ingredient [Regulated substance]</b>	<b>ppm</b>	<b>mg/m<sup>3</sup></b>	<b>Value type</b>	<b>Short term exposure limit category / Remarks</b>	<b>Regulatory list</b>
Diuron 330-54-1 [DIURON (ISO)]		10	Time Weighted Average (TWA):		IR_OEL
Quartz (SiO <sub>2</sub> ) 14808-60-7 [RESPIRABLE CRYSTALLINE SILICA DUST]		0,1	Time Weighted Average (TWA):		EU OELIII
Quartz (SiO <sub>2</sub> ) 14808-60-7 [Silica, crystalline, respirable dust (Cristobalite, Quartz, Tridymite, Tripoli)]		0,1	Time Weighted Average (TWA):	Binding OELV	IR_OEL

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

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	aqua (freshwater)		0,006 mg/l				
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	Freshwater - intermittent		0,018 mg/l				
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	aqua (marine water)		0,001 mg/l				
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	Marine water - intermittent		0,002 mg/l				
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	sewage treatment plant (STP)		10 mg/l				
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	sediment (freshwater)				0,341 mg/kg		
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	sediment (marine water)				0,034 mg/kg		
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	Soil				0,065 mg/kg		
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	oral				11 mg/kg		
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight ≤ 700 1675-54-3	Air						no hazard identified
Reaction product: bisphenol-F- (epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) -----	aqua (freshwater)		0,003 mg/l				
Reaction product: bisphenol-F- (epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) -----	aqua (marine water)		0,0003 mg/l				
Reaction product: bisphenol-F- (epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) -----	sewage treatment plant (STP)		10 mg/l				
Reaction product: bisphenol-F- (epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) -----	sediment (freshwater)				0,294 mg/kg		
Reaction product: bisphenol-F- (epichlorhydrin); epoxy resin (number	sediment (marine water)				0,0294 mg/kg		

average molecular weight $\leq 700$ ) -----							
Reaction product: bisphenol-F- (epichlorhydrin); epoxy resin (number average molecular weight $\leq 700$ ) -----	Soil				0,237 mg/kg		
Reaction product: bisphenol-F- (epichlorhydrin); epoxy resin (number average molecular weight $\leq 700$ ) -----	aqua (intermittent releases)		0,0254 mg/l				
Reaction product: bisphenol-F- (epichlorhydrin); epoxy resin (number average molecular weight $\leq 700$ ) -----	Air						no hazard identified
Reaction product: bisphenol-F- (epichlorhydrin); epoxy resin (number average molecular weight $\leq 700$ ) -----	Predator						no potential for bioaccumulation
diuron 330-54-1	sewage treatment plant (STP)		58 mg/l				
diuron 330-54-1	aqua (freshwater)		0,00032 mg/l				
diuron 330-54-1	sediment (freshwater)				0,05172 mg/kg		
diuron 330-54-1	Soil				0,012 mg/kg		
diuron 330-54-1	aqua (marine water)		0,000032 mg/l				
diuron 330-54-1	sediment (marine water)				0,005172 mg/kg		

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

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight $\leq 700$ 1675-54-3	Workers	inhalation	Long term exposure - systemic effects		4,93 mg/m <sup>3</sup>	no hazard identified
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight $\leq 700$ 1675-54-3	Workers	dermal	Long term exposure - systemic effects		0,75 mg/kg	no hazard identified
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight $\leq 700$ 1675-54-3	General population	inhalation	Long term exposure - systemic effects		0,87 mg/m <sup>3</sup>	no hazard identified
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight $\leq 700$ 1675-54-3	General population	dermal	Long term exposure - systemic effects		0,0893 mg/kg	no hazard identified
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight $\leq 700$ 1675-54-3	General population	oral	Long term exposure - systemic effects		0,5 mg/kg	no hazard identified
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight $\leq 700$ 1675-54-3	Workers	inhalation	Long term exposure - local effects			no hazard identified
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight $\leq 700$ 1675-54-3	Workers	inhalation	Acute/short term exposure - local effects			no hazard identified
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight $\leq 700$ 1675-54-3	Workers	dermal	Long term exposure - local effects			no hazard identified
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight $\leq 700$ 1675-54-3	Workers	dermal	Acute/short term exposure - local effects			no hazard identified
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight $\leq 700$ 1675-54-3	General population	inhalation	Long term exposure - local effects			no hazard identified
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight $\leq 700$ 1675-54-3	General population	inhalation	Acute/short term exposure - local effects			no hazard identified
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight $\leq 700$ 1675-54-3	General population	dermal	Long term exposure - local effects			no hazard identified
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, number average molecular weight $\leq 700$ 1675-54-3	General population	dermal	Acute/short term exposure - local effects			no hazard identified
Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight $\leq 700$ ) -----	Workers	Inhalation	Long term exposure - systemic effects		29,39 mg/m <sup>3</sup>	no hazard identified



Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight $\leq 700$ ) -----	Workers	dermal	Long term exposure - systemic effects		104,15 mg/kg	no hazard identified
Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight $\leq 700$ ) -----	Workers	dermal	Acute/short term exposure - local effects		0,0083 mg/cm <sup>2</sup>	no hazard identified
Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight $\leq 700$ ) -----	General population	Inhalation	Long term exposure - systemic effects		8,7 mg/m <sup>3</sup>	no hazard identified
Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight $\leq 700$ ) -----	General population	dermal	Long term exposure - systemic effects		62,5 mg/kg	no hazard identified
Reaction product: bisphenol-F-(epichlorhydrin); epoxy resin (number average molecular weight $\leq 700$ ) -----	General population	oral	Long term exposure - systemic effects		6,25 mg/kg	no hazard identified
diuron 330-54-1	Workers	inhalation	Long term exposure - systemic effects		0,17 mg/m <sup>3</sup>	
diuron 330-54-1	Workers	dermal	Long term exposure - systemic effects		5,79 mg/kg	

**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 &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:

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

Delivery form	paste
Colour	black
Odor	mild
Physical state	solid
Melting point	> 200 °C (> 392 °F)
Solidification temperature	Not applicable, Product is a solid.
Initial boiling point	> 300 °C (> 572 °F)
Flammability	The product is not flammable.
Explosive limits	Not applicable, Product is a solid.
Flash point	> 100 °C (> 212 °F)
Auto-ignition temperature	Not applicable, Product is a solid.
Decomposition temperature	> 150 °C (> 302 °F);
pH	Not applicable, Product is non-soluble (in water).
Viscosity (kinematic)	Not applicable, Product is a solid.
Solubility (qualitative) (20 °C (68 °F); Solvent: Water)	Insoluble
Partition coefficient: n-octanol/water	Not applicable
Vapour pressure (20 °C (68 °F))	Mixture < 0,1 hPa
Density (20 °C (68 °F))	1,7 g/cm <sup>3</sup> None
Relative vapour density:	Not applicable, Product is a solid.
Particle characteristics	Not applicable, mixture is a paste.

### 9.2. Other information

Other information not applicable for this product

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reacts with strong oxidants.  
Reaction with strong acids.

### 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.

### 10.5. Incompatible materials

See section reactivity.

### 10.6. Hazardous decomposition products

carbon oxides.

**SECTION 11: Toxicological information****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.

**11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008****Acute oral toxicity:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] bisoxirane 1675-54-3	LD50	> 2.000 mg/kg	rat	OECD Guideline 420 (Acute Oral Toxicity)
Bisphenol-F epichlorhydrin resin; MW<700 -----	LD50	> 5.000 mg/kg	rat	equivalent or similar to OECD Guideline 401 (Acute Oral Toxicity)
diuron 330-54-1	LD50	1.000 - 1.017 mg/kg	rat	not specified
diuron 330-54-1	Acute toxicity estimate (ATE)	1.000 mg/kg		Expert judgement
Quartz (SiO <sub>2</sub> ), <1% respirable 14808-60-7	LD50	> 5.050 mg/kg	rat	not specified

**Acute dermal toxicity:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Species	Method
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] bisoxirane 1675-54-3	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
Bisphenol-F epichlorhydrin resin; MW<700 -----	LD50	> 2.000 mg/kg	rat	equivalent or similar to OECD Guideline 402 (Acute Dermal Toxicity)
diuron 330-54-1	LD50	> 5.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
Quartz (SiO <sub>2</sub> ), <1% respirable 14808-60-7	LD50	> 2.000 mg/kg	not specified	not specified

**Acute inhalative toxicity:**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Test atmosphere	Exposure time	Species	Method
diuron 330-54-1	LC50	> 5,05 mg/l	dust/mist	4 h	rat	OECD Guideline 403 (Acute Inhalation Toxicity)
diuron 330-54-1	Acute toxicity estimate (ATE)	5,051 mg/l	dust/mist			Expert judgement

**Skin corrosion/irritation:**

Causes skin irritation.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
2,2'-(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] bisoxirane 1675-54-3	slightly irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Bisphenol-F epichlorhydrin resin; MW<700 -----	irritating	4 h	rabbit	equivalent or similar to OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
diuron 330-54-1	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

**Serious eye damage/irritation:**

Causes serious eye irritation.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
2,2'-(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] bisoxirane 1675-54-3	slightly irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Bisphenol-F epichlorhydrin resin; MW<700 -----	not irritating		rabbit	equivalent or similar to OECD Guideline 405 (Acute Eye Irritation / Corrosion)
diuron 330-54-1	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

**Respiratory or skin sensitization:**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Test type	Species	Method
2,2'-(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] bisoxirane 1675-54-3	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Bisphenol-F epichlorhydrin resin; MW<700 -----	sensitising	Mouse local lymphnode assay (LLNA)	mouse	OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
diuron 330-54-1	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)

**Germ cell mutagenicity:**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] bisoxirane 1675-54-3	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 472 (Genetic Toxicology: Escherichia coli, Reverse Mutation Assay)
Bisphenol-F epichlorhydrin resin; MW<700 -----	positive	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
diuron 330-54-1	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
diuron 330-54-1	negative	mammalian cell gene mutation assay	with and without		OECD Guideline 476 (In vitro Mammalian Cell Gene Mutation Test)
diuron 330-54-1		in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)

**Carcinogenicity**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Sex	Method
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] bisoxirane 1675-54-3	not carcinogenic	dermal	2 y daily	mouse	male	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] bisoxirane 1675-54-3	not carcinogenic	oral: gavage	2 y daily	rat	male/female	OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

**Reproductive toxicity:**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Test type	Route of application	Species	Method
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] bisoxirane 1675-54-3	NOAEL P >= 50 mg/kg NOAEL F1 >= 750 mg/kg NOAEL F2 >= 750 mg/kg	Two generation study	oral: gavage	rat	OECD Guideline 416 (Two-Generation Reproduction Toxicity Study)
Bisphenol-F epichlorhydrin resin; MW<700 -----	NOAEL P > 750 mg/kg NOAEL F1 750 mg/kg NOAEL F2 750 mg/kg	two-generation study	oral: gavage	rat	OECD Guideline 416 (Two-Generation Reproduction Toxicity Study)

**STOT-single exposure:**

No data available.

**STOT-repeated exposure:**

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Route of application	Exposure time / Frequency of treatment	Species	Method
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)] bisoxirane 1675-54-3	NOAEL 50 mg/kg	oral: gavage	14 w daily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Bisphenol-F epichlorhydrin resin; MW<700 -----	NOAEL 250 mg/kg	oral: gavage	13 w daily	rat	OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

**Aspiration hazard:**

No data available.

**11.2 Information on other hazards**

not applicable

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

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

**12.1. Toxicity****Toxicity (Fish):**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane 1675-54-3	LC50	1,75 mg/l	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
Bisphenol-F epichlorhydrin resin; MW<700 -----	LC50	5,7 mg/l	96 h	Leuciscus idus	OECD Guideline 203 (Fish, Acute Toxicity Test)
diuron 330-54-1	NOEC	4,2 mg/l	7 d	Pimephales promelas	OECD Guideline 204 (Fish, Prolonged Toxicity Test: 14-day Study)
diuron 330-54-1	LC50	6,6 mg/l	96 h	Leuciscus idus melanotus	OECD Guideline 203 (Fish, Acute Toxicity Test)
Quartz (SiO <sub>2</sub> ), <1% respirable 14808-60-7	LC50	> 1.000 mg/l	96 h	not specified	OECD Guideline 203 (Fish, Acute Toxicity Test)

**Toxicity (aquatic invertebrates):**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane 1675-54-3	EC50	1,7 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Bisphenol-F epichlorhydrin resin; MW<700 -----	EC50	2,55 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
diuron 330-54-1	EC50	1,4 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Quartz (SiO <sub>2</sub> ), <1% respirable 14808-60-7	EC50	> 1.000 mg/l	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

**Chronic toxicity (aquatic invertebrates):**

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane 1675-54-3	NOEC	0,3 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)
Bisphenol-F epichlorhydrin resin; MW<700	NOEC	0,3 mg/l	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)

-----					
-------	--	--	--	--	--

**Toxicity (Algae):**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane 1675-54-3	EC50	> 11 mg/l	72 h	Scenedesmus capricornutum	OECD Guideline 201 (Alga, Growth Inhibition Test)
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane 1675-54-3	NOEC	4,2 mg/l	72 h	Scenedesmus capricornutum	OECD Guideline 201 (Alga, Growth Inhibition Test)
Bisphenol-F epichlorhydrin resin; MW<700 -----	EC50	1,8 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
diuron 330-54-1	NOEC	0,0032 mg/l	96 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
diuron 330-54-1	EC50	0,022 mg/l	96 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus)	OECD Guideline 201 (Alga, Growth Inhibition Test)
Quartz (SiO <sub>2</sub> ), <1% respirable 14808-60-7	EC50	> 1.000 mg/l	72 h	not specified	OECD Guideline 201 (Alga, Growth Inhibition Test)

**Toxicity (microorganisms):**

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Value type	Value	Exposure time	Species	Method
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane 1675-54-3	IC50	> 100 mg/l	3 h	activated sludge, industrial	other guideline:
Bisphenol-F epichlorhydrin resin; MW<700 -----	IC50	> 100 mg/l	3 h	activated sludge, industrial	other guideline:
diuron 330-54-1	EC 50	> 10.000 mg/l			OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Quartz (SiO <sub>2</sub> ), <1% respirable 14808-60-7	EC0	> 1.000 mg/l	3 h	not specified	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)

**12.2. Persistence and degradability**



The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	Result	Test type	Degradability	Exposure time	Method
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane 1675-54-3	not readily biodegradable.	aerobic	5 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Bisphenol-F epichlorhydrin resin; MW<700 -----	not readily biodegradable.	aerobic	0 %	28 d	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)
diuron 330-54-1		aerobic	0 %	28 d	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)

### 12.3. Bioaccumulative potential

No substance data available.  
No data available.

### 12.4. Mobility in soil

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	LogPow	Temperature	Method
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane 1675-54-3	3,242	25 °C	EU Method A.8 (Partition Coefficient)
Bisphenol-F epichlorhydrin resin; MW<700 -----	2,7 - 3,6		OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)
diuron 330-54-1	2,84	20 °C	OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)

### 12.5. Results of PBT and vPvB assessment

The table below presents the data of the classified substances present in the mixture.

Hazardous substances CAS-No.	PBT / vPvB
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane 1675-54-3	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Bisphenol-F epichlorhydrin resin; MW<700 -----	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
diuron 330-54-1	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Quartz (SiO <sub>2</sub> ), <1% respirable 14808-60-7	According to Annex XIII to Regulation (EC) No 1907/2006, a PBT and vPvB assessment shall not be conducted for inorganic substances.

### 12.6. Endocrine disrupting properties

not applicable

### 12.7. 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 or ID number**

ADR	3077
RID	3077
ADN	3077
IMDG	3077
IATA	3077

**14.2. UN proper shipping name**

ADR	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Epoxy resin,diuron)
RID	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Epoxy resin,diuron)
ADN	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Epoxy resin,diuron)
IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Epoxy resin,diuron)
IATA	Environmentally hazardous substance, solid, n.o.s. (Epoxy resin,diuron)

**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	Environmentally Hazardous
RID	Environmentally Hazardous

ADN	Environmentally Hazardous
IMDG	Marine Pollutant
IATA	Environmentally Hazardous

**14.6. Special precautions for user**

ADR	not applicable
	Tunnelcode:
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), A197 (IATA), 2.10.2.7 (IMDG), NZ 4.3(10) may be applied, which can result in a deviation from the transport classification for packed goods.

**14.7. Maritime transport in bulk according to IMO instruments**

not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Ozone Depleting Substance (ODS) (Regulation (EC) No 1005/2009):	Not applicable
Prior Informed Consent (PIC) (Regulation (EU) No 649/2012):	diuron
	CAS 330-54-1

Persistent organic pollutants (Regulation (EU) 2019/1021):	Not applicable
VOC content (2010/75/EC)	< 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:

H302 Harmful if swallowed.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H351 Suspected of causing cancer.  
H373 May cause damage to organs through prolonged or repeated exposure.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.  
H411 Toxic to aquatic life with long lasting effects.

ED:	Substance identified as having endocrine disrupting properties
EU OEL:	Substance with a Union workplace exposure limit
EU EXPLD 1:	Substance listed in Annex I, Reg (EC) No. 2019/1148
EU EXPLD 2	Substance listed in Annex II, Reg (EC) No. 2019/1148
SVHC:	Substance of very high concern (REACH Candidate List)
PBT:	Substance fulfilling persistent, bioaccumulative and toxic criteria
PBT/vPvB:	Substance fulfilling persistent, bioaccumulative and toxic plus very persistent and very bioaccumulative criteria
vPvB:	Substance fulfilling very persistent and very bioaccumulative criteria

### Further information:

This Safety Data Sheet has been produced for sales from Henkel to parties purchasing from Henkel, is based on Regulation (EC) No 1907/2006 and provides information in accordance with applicable regulations of the European Union only. In that respect, no statement, warranty or representation of any kind is given as to compliance with any statutory laws or regulations of any other jurisdiction or territory other than the European Union. When exporting to territories other than the European Union, please consult with the respective Safety Data Sheet of the concerned territory to ensure compliance or liaise with Henkel's Product Safety and Regulatory Affairs Department (SDSinfo.Adhesive@henkel.com) prior to export to other territories than the European Union.

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.

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.**