



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

Page 1 of 13

3471A

SDS No. : 173477
V006.0

Revision: 19.02.2015

printing date: 24.03.2015

Replaces version from: 19.11.2014

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

1.1. Product identifier

3471A

Contains:

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight \leq 700)

1,3-bis(2,3-epoxypropoxy)-2,2-bis[(2,3-epoxypropoxy)methyl]propane

Oxirane, mono[(C10-16-alkyloxy)methyl] derivs

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 Limited

2 Bishop Square Business Park

AL109EY Herfordshire Hatfield

Great Britain

Phone: +44 1606 593933

Fax-no.: +44 1606 863762

ua-productsafety.uk@uk.henkel.com

1.4. Emergency telephone number

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Skin 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.	

Classification (DPD):

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

2.2. Label elements

Label elements (CLP):

Hazard pictogram:



Signal word:

Warning

Hazard statement:

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**

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.

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:

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700),
1,3-bis(2,3-epoxypropoxy)-2,2-bis[(2,3-epoxypropoxy)methyl]propane,
Oxirane, mono[(C10-16-alkyloxy)methyl] derivs

2.3. Other hazards

None if used properly.

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.	content	Classification
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	500-033-5 500-033-5 01-2119456619-26	25- 50 %	Skin irritation 2 H315 Skin sensitizer 1 H317 Serious eye irritation 2 H319 Chronic hazards to the aquatic environment 2 H411
1,3-bis(2,3-epoxypropoxy)-2,2-bis[(2,3-epoxypropoxy)methyl]propane 3126-63-4	221-507-5	2,5- 10 %	Skin irritation 2 H315 Skin sensitizer 1 H317 Serious eye irritation 2 H319
Oxirane, mono[(C10-16-alkyloxy)methyl] derivs 68081-84-5	268-358-2	<= 2,5 %	Skin irritation 2; Dermal H315 Skin sensitizer 1; Dermal H317 Serious eye irritation 2 H319 Chronic hazards to the aquatic environment 2 H411

For full text of the H - statements and other abbreviations see section 16 "Other information".
Substances without classification may have community workplace exposure limits available.

Declaration of ingredients according to DPD (EC) No 1999/45:

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	500-033-5 500-033-5 01-2119456619-26	25 - 50 %	R43 Xi - Irritant; R36/38 N - Dangerous for the environment; R51/53
1,3-bis(2,3-epoxypropoxy)-2,2-bis[(2,3-epoxypropoxy)methyl]propane 3126-63-4	221-507-5	2,5 - 10 %	Xi - Irritant; R36/38, R43
Oxirane, mono[(C10-16-alkyloxy)methyl] derivs 68081-84-5	268-358-2	<= 2,5 %	Xi - Irritant; R36/38, R43 N - Dangerous for the environment; R51/53

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**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.
Seek medical advice.

Eye contact:

Rinse immediately with plenty of running water (for 10 minutes). Seek medical attention if necessary.

Ingestion:

Rinse out mouth, drink 1-2 glasses of water, do not induce vomiting.
Seek medical advice.

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

EYE: Irritation, conjunctivitis.

SKIN: Rash, Urticaria.

SKIN: Redness, inflammation.

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

Oxides of carbon, oxides of nitrogen, irritating organic vapors.

5.3. Advice for firefighters

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid skin and eye contact.
See advice in section 8

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.
Dispose of contaminated material as waste according to Section 13.

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.

Hygiene measures:

- Do not eat, drink or smoke while working.
- Good industrial hygiene practices should be observed.
- Wash hands before work breaks and after finishing work.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool, well-ventilated place.

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

None

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)					0,0006 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	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)				0,0996 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	

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	

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

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.

Skin protection:

Wear suitable protective clothing.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Appearance	paste
	grey
Odor	mild
Odour threshold	No data available / Not applicable
pH	No data available / Not applicable
Initial boiling point	> 100 °C (> 212 °F)
Flash point	> 100 °C (> 212 °F)
Decomposition temperature	No data available / Not applicable
Vapour pressure	No data available / Not applicable
Density	2,3 g/cm ³
()	
Bulk density	No data available / Not applicable
Viscosity	No data available / Not applicable
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Solubility (qualitative)	Not miscible
(Solvent: Water)	
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 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.

10.5. Incompatible materials

No data available.

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 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

Oral toxicity:

May cause irritation to the digestive tract.

Inhalative toxicity:

May cause irritation to respiratory system.

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
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	LD50	> 2.000 mg/kg	oral		rat	
Oxirane, mono[(C10-16-alkyloxy)methyl] derivs 68081-84-5	LD50	> 5.000 mg/kg	oral		rat	

Acute dermal toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	LD50	23.000 mg/kg	dermal		rabbit	

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	slightly irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
Reaction product: bisphenol-A- (epichlorhydrin); 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)

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Reaction product: bisphenol-A- (epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	negative	bacterial reverse mutation assay (e.g Ames test)			OECD Guideline 472 (Genetic Toxicology: Escherichia coli, Reverse Mutation Assay)

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 1272/2008/EC. 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
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	LC50	1,750000 mg/l	Fish	96 h	Oncorhynchus mykiss	OECD Guideline 203 (Fish, Acute Toxicity Test)
	LC50	1,75 mg/l	Fish	96 h	Oncorhynchus mykiss (reported as Salmo gairdneri)	OECD Guideline 203 (Fish, Acute Toxicity Test)
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	NOEC	2,4 mg/l	Algae	72 h	Scenedesmus capricornutum	OECD Guideline 201 (Alga, Growth Inhibition Test)
	EC50	9,4 mg/l	Algae	72 h	Scenedesmus capricornutum	OECD Guideline 201 (Alga, Growth Inhibition Test)
Reaction product: bisphenol-A-(epichlorhydrin); 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-bis(2,3-epoxypropoxy)-2,2-bis[(2,3-epoxypropoxy)methyl]propane 3126-63-4	LC50	460 mg/l	Fish	96 h	Leuciscus idus	OECD Guideline 203 (Fish, Acute Toxicity Test)
Oxirane, mono[(C10-16-alkyloxy)methyl] derivs 68081-84-5	LC50	> 1 - 10 mg/l	Fish	96 h		OECD Guideline 203 (Fish, Acute Toxicity Test)
Oxirane, mono[(C10-16-alkyloxy)methyl] derivs 68081-84-5	EC50	> 1 - 10 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

12.2. Persistence and degradability

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6		aerobic	5 %	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)

12.3. Bioaccumulative potential / 12.4. Mobility in soil

Mobility:

Cured adhesives are immobile.

Hazardous components CAS-No.	LogKow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
1,3-bis(2,3-epoxypropoxy)-2,2-bis[(2,3-epoxypropoxy)methyl]propane 3126-63-4	< 2,6					OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)

12.5. Results of PBT and vPvB assessment

Hazardous components CAS-No.	PBT/vPvB

Reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight <= 700) 25068-38-6	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.

Dispose of in accordance with local and national regulations.

Waste code

08 04 09 waste adhesives and sealants containing organic solvents and other dangerous substances

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. Packaging 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 Tunnelcode: (E)
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

14.7. Transport in bulk according to Annex II of MARPOL 73/78 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 % Combined A/B

(1999/13/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:

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.

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.

Further information:

This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

Relevant changes in this safety data sheet are indicated by vertical lines at the left margin in the body of this document. Corresponding text is displayed in a different color on shadowed fields.



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

Page 1 of 10

sds no. : 173478
V004.0

3471B

Revision: 13.11.2012
printing date: 24.03.2015

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

1.1. Product identifier

3471B

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

Intended use:

Epoxy Hardener

1.3. Details of the supplier of the safety data sheet

Henkel Limited

2 Bishop Square Business Park

AL109EY Herfordshire Hatfield

Great Britain

Phone: +44 1606 593933

Fax-no.: +44 1606 863762

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 (DPD):

Xi - Irritant

R38 Irritating to skin.

R41 Risk of serious damage to eyes.

Sensitizing

R43 May cause sensitisation by skin contact.

2.2. Label elements

Label elements (DPD):

|| Xi - Irritant

**Risk phrases:**

|| R38 Irritating to skin.
 || R41 Risk of serious damage to eyes.
 || 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.
 || S37/39 Wear suitable gloves and eye/face protection.

Contains:

4,4'-Isopropylidenediphenol

2.3. Other hazards

None if used properly.

SECTION 3: Composition/information on ingredients**Declaration of the ingredients according to CLP (EC) No 1272/2008:**

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
C36 Fatty acid dimer, tall oil fatty acid, triethylenetetramine polymer 68082-29-1		20- 30 %	Serious eye damage 1 H318 Skin irritation 2 H315
4,4'-Isopropylidenediphenol 80-05-7	201-245-8 01-2119457856-23	1- < 5 %	Serious eye damage 1 H318 Toxic to reproduction 2 H361f Specific target organ toxicity - single exposure 3 H335 Skin sensitizer 1 H317

**For full text of the H - statements and other abbreviations see section 16 "Other information".
 Substances without classification may have community workplace exposure limits available.**

Declaration of ingredients according to DPD (EC) No 1999/45:

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
C36 Fatty acid dimer, tall oil fatty acid, triethylenetetramine polymer 68082-29-1		20 - 30 %	Xi - Irritant; R38, R41
4,4'-Isopropylidenediphenol 80-05-7	201-245-8 01-2119457856-23	1 - < 5 %	Xi - Irritant; R37, R41 R52 R43 Toxic for reproduction - category 3.; R62

**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

4.1. Description of first aid measures

Inhalation:

Move to fresh air.
In case of adverse health effects seek medical advice.

Skin contact:

Rinse with running water and soap.
Seek medical advice.

Eye contact:

Rinse immediately with plenty of running water (for 10 minutes). Seek medical attention if necessary.

Ingestion:

Rinse out mouth, drink 1-2 glasses of water, do not induce vomiting.
Seek medical advice.

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

SKIN: Rash, Urticaria.

SKIN: Redness, inflammation.

EYE: Irritation, conjunctivitis.

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

None

5.3. Advice for firefighters

Wear self-contained breathing apparatus.
Wear protective equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.
Avoid skin and eye contact.
Wear protective equipment.
See advice in chapter 8

6.2. Environmental precautions

Do not let product enter drains.

6.3. Methods and material for containment and cleaning up

For large spills absorb onto inert absorbent material and place in sealed container for disposal.
Dispose of contaminated material as waste according to Chapter 13.

6.4. Reference to other sections

See advice in chapter 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid skin and eye contact.
Use only in well-ventilated areas.
Gloves and safety glasses should be worn
Do not inhale vapors and fumes.

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

Store in sealed original container.
Store in a cool, well-ventilated place.

7.3. Specific end use(s)

Epoxy Hardener

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for
Great Britain

Ingredient	ppm	mg/m ³	Type	Category	Remarks
BISPHENOL A, INHALABLE DUST 80-05-7		10	Time Weighted Average (TWA):		EH40 WEL
BISPHENOL A (INHALABLE DUST) 80-05-7		10	Time Weighted Average (TWA):	Indicative	ECTLV

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
4,4'-Isopropylidenediphenol 80-05-7	aqua (freshwater)					0,018 mg/L	
4,4'-Isopropylidenediphenol 80-05-7	aqua (marine water)					0,016 mg/L	
4,4'-Isopropylidenediphenol 80-05-7	aqua (intermittent releases)					0,01 mg/L	
4,4'-Isopropylidenediphenol 80-05-7	STP					320 mg/L	
4,4'-Isopropylidenediphenol 80-05-7	sediment (freshwater)				2,2 mg/kg		
4,4'-Isopropylidenediphenol 80-05-7	sediment (marine water)				0,44 mg/kg		
4,4'-Isopropylidenediphenol 80-05-7	soil				3,7 mg/kg		
4,4'-Isopropylidenediphenol 80-05-7	oral					13,8 mg/kg food	

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
4,4'-Isopropylidenediphenol 80-05-7	worker	dermal	Acute/short term exposure - systemic effects		1,4 mg/kg bw/day	
4,4'-Isopropylidenediphenol 80-05-7	worker	inhalation	Acute/short term exposure - local effects		10 mg/m ³	
4,4'-Isopropylidenediphenol 80-05-7	worker	dermal	Long term exposure - systemic effects		1,4 mg/kg bw/day	
4,4'-Isopropylidenediphenol 80-05-7	worker	inhalation	Long term exposure - local effects		10 mg/m ³	
4,4'-Isopropylidenediphenol 80-05-7	worker	inhalation	Acute/short term exposure - systemic effects		10 mg/m ³	
4,4'-Isopropylidenediphenol 80-05-7	worker	inhalation	Long term exposure - systemic effects		10 mg/m ³	
4,4'-Isopropylidenediphenol 80-05-7	general population	dermal	Acute/short term exposure - systemic effects		0,7 mg/kg bw/day	
4,4'-Isopropylidenediphenol 80-05-7	general population	inhalation	Acute/short term exposure - systemic effects		5,0 mg/m ³	
4,4'-Isopropylidenediphenol 80-05-7	general population	oral	Acute/short term exposure - systemic effects		0,05 mg/kg bw/day	
4,4'-Isopropylidenediphenol 80-05-7	general population	dermal	Long term exposure - systemic effects		0,7 mg/kg bw/day	
4,4'-Isopropylidenediphenol 80-05-7	general population	inhalation	Long term exposure - systemic effects		0,25 mg/m ³	
4,4'-Isopropylidenediphenol 80-05-7	general population	oral	Long term exposure - systemic effects		0,5 mg/kg bw/day	
4,4'-Isopropylidenediphenol 80-05-7	general population	inhalation	Long term exposure - local effects		5 mg/m ³	
4,4'-Isopropylidenediphenol 80-05-7	general population	inhalation	Acute/short term exposure - local effects		5 mg/m ³	

Biological Exposure Indices:
None**8.2. Exposure controls:**

Respiratory protection:

- Ensure adequate ventilation.
- Do not inhale vapors and fumes.

Hand protection:

Chemical-resistant protective gloves (EN 374).

Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):

nitrile rubber (NBR; \geq 0.4 mm thickness)

Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):

nitrile rubber (NBR; \geq 0.4 mm thickness)

This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:

Tightly fitting safety goggles
Avoid eye contact.

Skin protection:

Wear suitable protective clothing.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Appearance	paste grey
Odor	Mild
pH	No data available / Not applicable
Initial boiling point	> 100 °C (> 212 °F)
Flash point	> 100 °C (> 212 °F)
Decomposition temperature	No data available / Not applicable
Vapour pressure	No data available / Not applicable
Density	2,4 g/cm ³
()	
Bulk density	No data available / Not applicable
Viscosity	No data available / Not applicable
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Solubility (qualitative)	Not miscible
(Solvent: Water)	
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 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.
Avoid contact with acids and oxidizing agents.
Avoid contact with water.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

carbon oxides.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****General toxicological information:**

The preparation is classified based on the conventional method outlined in Article 6(1)(a) of Directive 1999/45/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

Oral toxicity:

May cause irritation to the digestive tract.

Inhalative toxicity:

May cause irritation to respiratory system.

Skin irritation:

Irritating to the skin.

Eye irritation:

The product may cause serious eye damage.

Sensitizing:

May cause sensitization by skin contact.

Acute toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
4,4'- Isopropylidenediphenol 80-05-7	LD50 LD50	5.000 mg/kg 3.600 mg/kg	oral dermal		rat rabbit	OECD Guideline 401 (Acute Oral Toxicity)

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
4,4'- Isopropylidenediphenol 80-05-7	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		

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

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

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

The preparation is classified based on the conventional method outlined in Article 6(1)(a) of Directive 1999/45/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

Mobility:

Cured adhesives are immobile.

12.1. Toxicity

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
4,4'-Isopropylidenediphenol 80-05-7	LC50	9,9 mg/l	Fish	96 h	Brachydanio rerio (new name: Danio rerio)	OECD Guideline 203 (Fish, Acute Toxicity Test)
4,4'-Isopropylidenediphenol 80-05-7	EC50	3,9 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
4,4'-Isopropylidenediphenol 80-05-7	EC50	2,5 mg/l	Algae	96 h	Selenastrum capricornutum (new name: Pseudokirchnerella subcapitata)	OECD Guideline 201 (Alga, Growth Inhibition Test)

12.2. Persistence and degradability

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
4,4'-Isopropylidenediphenol 80-05-7	readily biodegradable	aerobic	67 - 70 %	EU Method C.4-E (Determination of the "Ready" Biodegradability Closed Bottle Test)

12.3. Bioaccumulative potential / 12.4. Mobility in soil

Hazardous components CAS-No.	LogKow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
4,4'-Isopropylidenediphenol 80-05-7	3,4	5,1 - 13,8	42 d	Cyprinus carpio	25 °C	OECD Guideline 107 (Partition Coefficient (n- octanol / water), Shake Flask Method)
21,5 °C						

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.

Waste code

08 04 09 waste adhesives and sealants containing organic solvents and other dangerous substances

SECTION 14: Transport information**14.1. UN number**

ADR	Not dangerous goods
RID	Not dangerous goods
ADNR	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

14.2. UN proper shipping name

ADR	Not dangerous goods
RID	Not dangerous goods
ADNR	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

14.3. Transport hazard class(es)

ADR	Not dangerous goods
RID	Not dangerous goods
ADNR	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

14.4. Packaging group

ADR	Not dangerous goods
RID	Not dangerous goods
ADNR	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

14.5. Environmental hazards

ADR	not applicable
RID	not applicable
ADNR	not applicable
IMDG	not applicable
IATA	not applicable

14.6. Special precautions for user

ADR	not applicable
RID	not applicable
ADNR	not applicable
IMDG	not applicable
IATA	not applicable

14.7. Transport in bulk according to Annex II of MARPOL 73/78 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 % Combined A/B
(2004/42/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:

- R37 Irritating to respiratory system.
- R38 Irritating to skin.
- R41 Risk of serious damage to eyes.
- R43 May cause sensitisation by skin contact.
- R52 Harmful to aquatic organisms.
- R62 Possible risk of impaired fertility.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H335 May cause respiratory irritation.
- H361f Suspected of damaging fertility.

Further information:

This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

This safety data sheet was prepared in accordance with Council Directive 67/548/EEC and its subsequent amendments, and Commission Directive 1999/45/EC.