



SAFETY DATA SHEET

ARBOKOL 682 POURING GRADE CURING AGENT

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

1.1. Product identifier

Product name ARBOKOL 682 POURING GRADE CURING AGENT

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

Identified uses Curing agent component of: Two-component, epoxy-based adhesive.

1.3. Details of the supplier of the safety data sheet

Supplier Adshead Ratcliffe & Co. Ltd.
Derby Road, Belper
Derbyshire.
DE56 1WJ
Tel. (+44) 01773 826661
Fax. (+44) 01773 821215
sds@arbo.co.uk

1.4. Emergency telephone number

Emergency telephone (+44) 01773 826661 (office hours only)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317

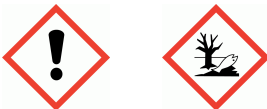
Environmental hazards Aquatic Chronic 2 - H411

Human health The product is irritating to eyes and skin. May cause skin sensitisation or allergic reactions in sensitive individuals.

Environmental The product contains a substance which is toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

2.2. Label elements

Pictogram



Signal word

Warning

Hazard statements

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.

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Precautionary statements	<p>P273 Avoid release to the environment.</p> <p>P280 Wear protective gloves.</p> <p>P280 Wear eye protection.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P337+P313 If eye irritation persists: Get medical advice/ attention.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p>
Contains	EPOXY RESIN (Number average MW ≤ 700), BISPHENOL F - EPICHLOROHYDRIN RESIN (number average MW ≤ 700)

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

EPOXY RESIN (Number average MW ≤ 700) CAS number: 25068-38-6 EC number: 500-033-5	30-60%
Classification Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317 Aquatic Chronic 2 - H411	
BISPHENOL F - EPICHLOROHYDRIN RESIN (number average MW ≤ 700) CAS number: 28064-14-4	10-30%
Classification Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317 Aquatic Chronic 2 - H411	
HEXAN-6-OLIDE CAS number: 502-44-3	1-5%
Classification Eye Irrit. 2 - H319	
3-GLYCIDOXYPROPYLTRIMETHOXYSILANE CAS number: 2530-83-8 EC number: 219-784-2	1-5%
Classification Eye Dam. 1 - H318	

The full text for all hazard statements is displayed in Section 16.

Composition comments Epoxy resin, with fillers, and auxiliaries.

SECTION 4: First aid measures

4.1. Description of first aid measures

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General information	In all cases of doubt, or if symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.
Inhalation	Move affected person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues.
Ingestion	Rinse mouth thoroughly with water. Give plenty of water to drink. Give milk instead of water if readily available. Get medical attention if any discomfort continues.
Skin contact	Wipe off excess material with cloth or paper. Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing. Show this Safety Data Sheet to the medical personnel.

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

Inhalation	No specific symptoms known.
Ingestion	May cause discomfort if swallowed. May cause irritation to mouth, throat and stomach.
Skin contact	Skin irritation. Allergic rash.
Eye contact	Irritating to eyes. Symptoms following overexposure may include the following: Redness. Pain.

4.3. Indication of any immediate medical attention and special treatment needed

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Use fire-extinguishing media suitable for the surrounding fire.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards	Toxic gases or vapours.
Hazardous combustion products	Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting	Control run-off water by containing and keeping it out of sewers and watercourses.
Special protective equipment for firefighters	Wear self contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet.
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6.2. Environmental precautions

Environmental precautions	Avoid discharge into drains or watercourses or onto the ground.
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6.3. Methods and material for containment and cleaning up

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Methods for cleaning up When handling waste, the safety precautions applying to handling of the product should be considered. Wear necessary protective equipment. Collect and place in suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water. Avoid the spillage or runoff entering drains, sewers or watercourses.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. The product contains a substance which is hazardous to aquatic organisms and which may cause long term adverse effects in the aquatic environment. See section 12. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid contact with skin and eyes. Persons susceptible to allergic reactions should not handle this product. Good personal hygiene procedures should be implemented.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place.

Storage class Miscellaneous hazardous material storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

Usage description Curing agent component of a two part pourable sealant / adhesive.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Ingredient comments No exposure limits known for ingredient(s).

HEXAN-6-OLIDE (CAS: 502-44-3)

DNEL	- Dermal; Long term systemic effects: 2.98 mg/kg/day - Inhalation; Long term local effects: 14 mg/m ³ - Inhalation; Long term systemic effects: 10.4 mg/m ³
PNEC	- STP; 32 mg/l - Fresh water; 0.204 mg/l - Intermittent release; 2.04 mg/l - Marine water; 0.0204 mg/l

8.2. Exposure controls

Protective equipment



Appropriate engineering controls Provide adequate ventilation.

Eye/face protection Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible.

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Hand protection	Use protective gloves. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material.
Other skin and body protection	Wear appropriate clothing to prevent any possibility of skin contact.
Hygiene measures	Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly if skin becomes contaminated.
Environmental exposure controls	Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Paste.
Colour	Off-white.
Odour	Slight.
Odour threshold	Not applicable.
pH	Not applicable.
Melting point	Not applicable.
Initial boiling point and range	Not applicable.
Flash point	Not applicable.
Evaporation rate	Not applicable.
Upper/lower flammability or explosive limits	Not applicable.
Vapour pressure	Not applicable.
Vapour density	Not applicable.
Relative density	1.30 - 1.35 @ 20°C
Solubility(ies)	Insoluble in water.
Partition coefficient	Not applicable.
Auto-ignition temperature	Not applicable.
Decomposition Temperature	Not determined.
Viscosity	500 - 900 P @ 20°C
Explosive properties	Not applicable.
Oxidising properties	The mixture itself has not been tested but none of the ingredient substances meet the criteria for classification as oxidising.

9.2. Other information

Other information	None.
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.
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10.2. Chemical stability

Stability Stable at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Not determined. Will not polymerise.

10.4. Conditions to avoid

Conditions to avoid Avoid excessive heat for prolonged periods of time.

10.5. Incompatible materials

Materials to avoid Strong acids. Strong alkalis. Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD₅₀) For this endpoint no toxicological data is available for the whole product.

Acute toxicity - dermal

Notes (dermal LD₅₀) For this endpoint no toxicological data is available for the whole product.

Skin corrosion/irritation

Animal data For this endpoint no toxicological data is available for the whole product.

Serious eye damage/irritation

Serious eye damage/irritation For this endpoint no toxicological data is available for the whole product.

Skin sensitisation

Skin sensitisation For this endpoint no toxicological data is available for the whole product.

Germ cell mutagenicity

Genotoxicity - in vitro For this endpoint no toxicological data is available for the whole product.

Carcinogenicity

Carcinogenicity For this endpoint no toxicological data is available for the whole product.

Reproductive toxicity

Reproductive toxicity - fertility For this endpoint no toxicological data is available for the whole product.

Specific target organ toxicity - single exposure

STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard Not relevant, due to the form of the product.

Inhalation No specific health hazards known.

Ingestion May cause discomfort if swallowed.

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Skin contact	Irritating to skin. May cause sensitisation by skin contact.
Eye contact	Irritating to eyes.
Acute and chronic health hazards	Mild dermatitis, allergic skin rash. Defatting, drying and cracking of skin.

Toxicological information on ingredients.

EPOXY RESIN (Number average MW <= 700)

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ >2000 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ >2000 mg/kg, Dermal, Rat

Skin corrosion/irritation

Animal data OECD 404 Acute dermal irritation / corrosion: Mildly irritating (rabbit)

Serious eye damage/irritation

Serious eye damage/irritation OECD 405 Acute eye irritation / corrosion: Mildly irritating (rabbit)

Skin sensitisation

Skin sensitisation Local Lymph Node Assay (LLNA) - : Sensitising.

SECTION 12: Ecological Information

Ecotoxicity The product contains substances which are toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

12.1. Toxicity

Toxicity There are no data for the product.

Ecological information on ingredients.

EPOXY RESIN (Number average MW <= 700)

Acute toxicity - fish LC₅₀, 96 hours: 1.5 mg/l, Algae

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 1.7 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: 9.4 mg/l, Fish

Acute toxicity - microorganisms IC₈₀, 3 hours: >100 mg/l, Bacteria

12.2. Persistence and degradability

Persistence and degradability This product is not expected to be readily biodegradable.

Ecological information on ingredients.

EPOXY RESIN (Number average MW <= 700)

Persistence and degradability The product is not readily biodegradable.

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Biodegradation - Degradation 5%: 28 days

12.3. Bioaccumulative potential

Bioaccumulative potential Bioaccumulation is unlikely to be significant because of the low water-solubility of this product.

Partition coefficient Not applicable.

Ecological information on ingredients.

EPOXY RESIN (Number average MW <= 700)

Bioaccumulative potential BCF: 31,

Partition coefficient log Pow: 3.242

12.4. Mobility in soil

Mobility The product is insoluble in water.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Waste is classified as hazardous waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Disposal methods May be mixed with base component to give an inert polymeric material.

Waste class HP4 Irritant HP13 Sensitising HP14 Ecotoxic Recommended EWC Code 08 04 09*

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID) 3077

UN No. (IMDG) 3077

UN No. (ICAO) 3077

UN No. (ADN) 3077

14.2. UN proper shipping name

Proper shipping name (ADR/RID) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (epoxy resin)

Proper shipping name (IMDG) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (epoxy resin)

Proper shipping name (ICAO) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (epoxy resin)

Proper shipping name (ADN) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (epoxy resin)

14.3. Transport hazard class(es)

ADR/RID class 9

ADR/RID classification code M7

ADR/RID label 9

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IMDG class	9
ICAO class/division	9
ADN class	9

Transport labels



14.4. Packing group

ADR/RID packing group	III
IMDG packing group	III
ADN packing group	III
ICAO packing group	III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



14.6. Special precautions for user

EmS	F-A, S-F
ADR transport category	3
Emergency Action Code	2Z
Hazard Identification Number (ADR/RID)	90
Tunnel restriction code	(E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

SECTION 15: Regulatory information

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

EU legislation	Regulation (EC) 1907/2006 REACH (as amended). Regulation (EC) 1272/2008 CLP (as amended).
Guidance	Workplace Exposure Limits EH40.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Revision comments	General review
Revision date	16/05/2017
Revision	1
Supersedes date	01/06/2015
SDS number	10319

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Hazard statements in full

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H411 Toxic to aquatic life with long lasting effects.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.