SAFETY DATA SHEET



ARALDITE® AQUA STICK GB

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

1.1 Product identifier

Product name : ARALDITE® AQUA STICK GB

Registration number : Not available. **Product code** : 00072826

Product description :

Other means of : Not available.

identification

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

Product use : Epoxy adhesive

1.3 Details of the supplier of the safety data sheet

Supplier : Huntsman Advanced Materials (Europe)BVBA

Everslaan 45

3078 Everberg / Belgium Tel.: +41 61 299 20 41 Fax: +41 61 299 20 40

e-mail address of person responsible for this SDS

: Global_Product_EHS_AdMat@huntsman.com

E-mail address to request full REACH registration number upon EU member State

Authority request:

REACH_Registration_Nr_AM@huntsman.com

1.4 Emergency telephone number

Supplier

Telephone number : EUROPE: +32 35 75 1234

France ORFILA: +33(0)145425959

ASIA: +65 6336-6011 China: +86 20 39377888 +86 532 83889090 India: + 91 22 42 87 5333 Australia: 1800 786 152 New Zealand: 0800 767 437 USA: +1/800/424.9300

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 3, H412

Ingredients of unknown

toxicity

Ingredients of unknown

ecotoxicity

Classification according to Directive 1999/45/EC [DPD]

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

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SECTION 2: Hazards identification

Classification : Xi; R36/38

R43 R52/53

Human health hazards : Irritating to eyes and skin. May cause sensitisation by skin contact.

Environmental hazards: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic

environment.

See Section 16 for the full text of the R phrases or H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms

<u>(!</u>)

Signal word : Warning

Hazard statements: Causes serious eye irritation.

Causes skin irritation.

May cause an allergic skin reaction.

Harmful to aquatic life with long lasting effects.

Precautionary statements

General: Read label before use. Keep out of reach of children. If medical advice is needed,

have product container or label at hand.

Prevention: Wear protective gloves. Wear eye or face protection. Avoid release to the

environment.

Response : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing.

Storage : Not applicable.

Disposal : Dispose of contents and container in accordance with all local, regional, national

and international regulations.

Hazardous ingredients: reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average

molecular weight < 700)

Supplemental label

elements

Not applicable.

Supplemental label

elements

: Contains epoxy constituents. See information supplied by the manufacturer.

Special packaging requirements

Containers to be fitted

with child-resistant

fastenings

: Not applicable.

Tactile warning of danger : Not applicable.

2.3 Other hazards

Other hazards which do not result in classification

: None known.

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SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

			Class		
Product/ingredient name	Identifiers	%	67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	Type
reaction product: bisphenol A- (epichlorhydrin); epoxy resin (number average molecular weight < 700)	CAS: 25068-38-6 EC: 500-033-5 RRN: 01-2119456619-26	13-30	Xi; R36/38 R43 N; R51/53 See Section 16 for the full text of the R- phrases declared above.	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411 See Section 16 for the full text of the H statements declared above.	[1]

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact

: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Inhalation

: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact

: Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion

: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of first-aiders

: No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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SECTION 4: First aid measures

4.2 Most important symptoms and effects, both acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : No known significant effects or critical hazards.

Skin contact : Causes skin irritation. May cause an allergic skin reaction.

Ingestion : Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:

> pain or irritation watering redness

Inhalation : No specific data.

Skin contact : Adverse symptoms may include the following:

> irritation redness

Ingestion : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large

quantities have been ingested or inhaled.

Specific treatments Symptomatic treatment and supportive therapy as indicated. Following severe

exposure the patient should be kept under medical review for at least 48 hours.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing

media

: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing

media

: None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being

discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products Decomposition products may include the following materials:

carbon dioxide carbon monoxide

halogenated compounds metal oxide/oxides

5.3 Advice for firefighters

Special precautions for

fire-fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

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SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and material for containment and cleaning up

Small spill

: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill

: Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

6.4 Reference to other sections

: See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures

: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

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SECTION 7: Handling and storage

7.2 Conditions for safe storage, including any incompatibilities

: Store between the following temperatures: 5 to 25°C (41 to 77°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Storage hazard class Huntsman Advanced Materials

: Storage class 12, Liquids, not dangerous

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific : Not available.

solutions

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters

Occupational exposure limits

No exposure limit value known.

Recommended monitoring procedures

: If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

Derived effect levels

Product/ingredient name	Type	Exposure	Value	Population	Effects
reaction product: bisphenol A- (epichlorhydrin); epoxy resin (number average molecular weight < 700)	DNEL	Short term Dermal	8.33 mg/ kg bw/day	Workers	Systemic
,	DNEL	Short term Inhalation	12.25 mg/ m³	Workers	Systemic
	DNEL	Long term Dermal	8.33 mg/ kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	12.25 mg/ m³	Workers	Systemic
	DNEL	Short term Dermal	3.571 mg/ kg bw/day	Consumers	Systemic
	DNEL	Short term Oral	0.75 mg/ kg bw/day	Consumers	Systemic
	DNEL	Long term Dermal	3.571 mg/ kg bw/day	Consumers	Systemic
	DNEL	Long term Oral	0.75 mg/ kg bw/day	Consumers	Systemic

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SECTION 8: Exposure controls/personal protection

Predicted effect concentrations

Product/ingredient name	Type	Compartment Detail	Value	Method Detail
reaction product: bisphenol A- (epichlorhydrin); epoxy resin (number average molecular weight < 700)	PNEC	Fresh water	0.006 mg/l	Assessment Factors
	PNEC	Marine PNECintermittent Fresh water sediment Marine water sediment Soil Sewage Treatment Plant Secondary Poisoning	0.0006 mg/l 0.018 mg/l 0.996 mg/kg 0.0996 mg/kg 0.196 mg/kg 10 mg/l	Assessment Factors Assessment Factors Equilibrium Partitioning Equilibrium Partitioning Equilibrium Partitioning Assessment Factors

8.2 Exposure controls

Appropriate engineering controls

: No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Individual protection measures

Hygiene measures

: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Use gloves approved to relevant standards e.g. EN 374 (Europe), F739 (US). Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material and dexterity. Always seek advice from glove suppliers. Additional information can be found for instance at www.gisbau.de.

Body protection

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection

: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection

: In case of inadequate ventilation wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

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SECTION 8: Exposure controls/personal protection

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid. [Paste.]

Colour : Green.
Odour : mild

Odour threshold : Not available.

PH : Not available.

Melting point/freezing point : Not available.

Initial boiling point and : Not available.

boiling range

Flash point : Not available.

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Burning time : Not applicable.

Burning rate : Not applicable.

Upper/lower flammability or : Not available.

explosive limits

Vapour pressure : <0.0065 kPa [room temperature]

Vapour density : Not available.

Relative density : Not available.

Solubility(ies)

Water solubility : Insoluble

Partition coefficient: n-octanol/: Not available.

water (LogKow)

. Not ovoilable

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Dynamic: Not available.
Kinematic: Not available.

Kinematic (40°C): Not available.

Explosive properties : Not available.

Oxidising properties : Not available.

9.2 Other information

Density : 1.96 to 2.02 g/cm³ [25°C (77°F)]

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SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions

: Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : No specific data.

10.5 Incompatible materials : No special precautions required.

10.6 Hazardous decomposition products

: Under normal conditions of storage and use, hazardous decomposition products

should not be produced.

Decomposition products may include the following materials: Carbon oxides

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Endpoint	Species	Result	Exposure
reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight < 700)	LC0 Inhalation Vapour	Rat - Male	0.00001 ppm	5 hours
	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-
	LD50 Oral	Rat - Female	>2000 mg/kg	-

Conclusion/Summary

: No additional information.

Acute toxicity estimates

Not available.

Irritation/Corrosion

Product/ingredient name	Test	Species	Route of exposure	Result
reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight < 700)	OECD 404 Acute Dermal Irritation/ Corrosion	Rabbit	Skin	Mild irritant
,	OECD 405 Acute Eye Irritation/ Corrosion	Rabbit	Eyes	Mild irritant

Conclusion/Summary

Skin: reaction product: Irritating to skin.

bisphenol A-

(epichlorhydrin); epoxy resin (number average molecular weight < 700)

Eyes: reaction product: Irritating to eyes.

bisphenol A-

(epichlorhydrin); epoxy resin (number average molecular weight < 700)

Respiratory : No additional information.

Sensitiser

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SECTION 11: Toxicological information

Product/ingredient name	Test	Route of exposure	Species	Result
reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight < 700)	OECD 429 Skin Sensitisation: Local Lymph Node Assay	skin	Mouse	Sensitising

Conclusion/Summary

Skin: No additional information.Respiratory: No additional information.

Mutagenicity

Product/ingredient name	Test	Result
reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight < 700)	OECD 471 Bacterial Reverse Mutation Test	Positive
,	OECD 476 In vitro Mammalian Cell Gene Mutation Test	Positive
	OECD 478 Genetic Toxicology: Rodent Dominant Lethal Test	Negative
	EPA OPPTS	Negative

Conclusion/Summary

: No additional information.

Carcinogenicity

Product/ingredient name	Test	Species	Exposure	Result	Route of exposure	Target organs
reaction product: bisphenol A- (epichlorhydrin); epoxy resin (number average molecular weight < 700)	OECD 453 Combined Chronic Toxicity/ Carcinogenicity Studies	Rat	2 years; 7 days per week	Negative	Oral	-
,	OECD 453 Combined Chronic Toxicity/ Carcinogenicity Studies	Rat	2 years; 5 days per week	Negative	Dermal	-
	OECD 453 Combined Chronic Toxicity/ Carcinogenicity Studies	Mouse	2 years; 3 days per week	Negative	Dermal	-

Conclusion/Summary

: No additional information.

Reproductive toxicity

Product/ingredient name	Test	Species	Result/Result type	Target organs
reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight < 700)	OECD 416 Two-Generation Reproduction Toxicity Study	Rat	Oral: 540 mg/kg NOEL	-

Conclusion/Summary

: No additional information.

Teratogenicity

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SECTION 11: Toxicological information

Product/ingredient name	Test	Species	Result/Result type
reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight < 700)	OECD 414 Prenatal Developmental Toxicity Study	Rat - Female	>540 mg/kg NOEL
,	EPA CFR	Rabbit - Female	>300 mg/kg NOEL
	OECD 414 Prenatal Developmental Toxicity Study	Rabbit - Female	180 mg/kg NOAEL

: No additional information. **Conclusion/Summary**

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely

routes of exposure

: Not available.

Potential acute health effects

Inhalation : No known significant effects or critical hazards.

: Irritating to mouth, throat and stomach. Ingestion

: Causes skin irritation. May cause an allergic skin reaction. **Skin contact**

: Causes serious eye irritation. **Eye contact**

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation : No specific data. Ingestion : No specific data.

Skin contact : Adverse symptoms may include the following:

> irritation redness

: Adverse symptoms may include the following: **Eye contact**

> pain or irritation watering

redness

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate

effects

: Not available.

Potential delayed effects: Not available.

Long term exposure

Potential immediate

: Not available.

effects

Potential delayed effects: Not available.

Potential chronic health effects

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SECTION 11: Toxicological information

Product/ingredient name	Test	Result type	Result	Target organs
reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight < 700)	OECD 408 Repeated Dose 90-Day Oral Toxicity Study in Rodents	NOAEL -	50 mg/kg	-
,	OECD 411 Subchronic Dermal Toxicity: 90-day Study	NOEL	10 mg/kg	-
	OECD 411 Subchronic Dermal Toxicity: 90-day Study	NOAEL	100 mg/kg	-

Conclusion/Summary

: No additional information.

General

: Once sensitized, a severe allergic reaction may occur when subsequently exposed

to very low levels.

Carcinogenicity
Mutagenicity
Teratogenicity

Developmental effects

No known significant effects or critical hazards.No known significant effects or critical hazards.

No known significant effects or critical hazards.
No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Other information : Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Test	Endpoint		Exposure	Species	Result	
reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight < 700)	EPA CFR	Acute	EC50	72 hours Static	Algae	9.4	mg/l
,	OECD 202 <i>Daphnia</i> sp. Acute Immobilisation Test	Acute	EC50	48 hours Static	Daphnia	1.7	mg/l
	Unknown guidelines	Acute	IC50	3 hours Static	Bacteria	>100	mg/l
	OECD 203 Fish, Acute Toxicity Test	Acute	LC50	96 hours Static	Fish	1.5	mg/l
	OECD 211 Daphnia Magna Reproduction Test	Chronic	NOEC	21 days Semi- static	Daphnia	0.3	mg/l

Conclusion/Summary: No additional information.

12.2 Persistence and degradability

Product/ingredient name	Test	Period	Result
reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight < 700)	OECD Derived from OECD 301F (Biodegradation Test)	28 days	5 %

Conclusion/Summary

: reaction product: bisphenol A-

Not readily biodegradable.

(epichlorhydrin); epoxy resin (number average molecular weight < 700)

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SECTION 12: Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight < 700)	Fresh water 4.83 days Fresh water 3.58 days Fresh water 7.1 days	-	Not readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight < 700)	3.242	31	low

12.4 Mobility in soil

Soil/water partition coefficient (Koc)

: Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

Not applicable.

12.6 Other adverse effects : No known significant effects or critical hazards.

12.7 Other ecological information

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation

: The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

. Voc

Hazardous waste : Yes.

<u>European waste catalogue (EWC)</u>

Waste code	Waste designation	
07 02 08*	other still bottoms and reaction residues	

Packaging

Methods of disposal

: The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions

: This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

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SECTION 14: Transport information

	14.1 UN number	14.2 UN proper shipping name
ADR/RID	Not regulated.	-
IMDG	Not regulated.	-
IATA	Not regulated.	-

	14.3 Transport hazard class(es)	14.4 Packing group	14.5 Environmental hazards	14.6 Special precautions for user	Additional information
ADR/RID	-	-	No.	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.	-
IMDG	_	-	No.	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.	
IATA	-	-	No.	Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.	-

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SECTION 14: Transport information

14.7 Transport in bulk : Not applicable.

according to Annex II of MARPOL 73/78 and the IBC

Code

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture EU Regulation (EC) No. 1907/2006 (REACH)

This product is compliant with the REACH Regulation EC 1907/2006.

Huntsman has pre-registered and is registering all of the substances that it manufactures in or imports into the European Economic Area (EEA) that are subject to Title II of the REACH Regulation.

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions

on the manufacture, placing on the market

and use of certain

dangerous substances,

mixtures and articles

Other EU regulations

Europe inventory : All components are listed or exempted. : Not listed

: Not applicable.

Black List Chemicals

Priority List Chemicals : Not listed

Integrated pollution

prevention and control

list (IPPC) - Air

Integrated pollution prevention and control

list (IPPC) - Water

: Not listed

: Not listed

National regulations

The provision of Safety Data Sheets comes under Regulation 6 of CHIP (CHIP is References the recognised abbreviation for the Chemicals Hazard Information and Packaging

Regulations). This is an addition to the Health and Safety at Work Act 1974.

Australia inventory (AICS)

Canada inventory

China inventory (IECSC) : Not determined.

Japan inventory

Korea inventory (KECI) : Not determined.

New Zealand Inventory of

Chemicals (NZIoC)

Philippines inventory : Not determined.

(PICCS)

United States inventory

(TSCA 8b)

: All components are listed or exempted.

Chemical Weapons

Convention List Schedule I

Chemicals

: Not listed

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SECTION 15: Regulatory information

Chemical Weapons

Convention List Schedule II

Chemicals

Chemical Weapons

Convention List Schedule III

Chemicals

: Not listed

: Not listed

15.2 Chemical Safety

Assessment

This product contains substances for which Chemical Safety Assessments are still

required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and

acronyms

: ATE = Acute Toxicity Estimate

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No.

1272/2008]

DNEL = Derived No Effect Level

EUH statement = CLP-specific Hazard statement PNEC = Predicted No Effect Concentration RRN = REACH Registration Number

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Skin Irrit. 2, H315	Expert judgment
Eye Irrit. 2, H319	Expert judgment
Skin Sens. 1, H317	Expert judgment
Aquatic Chronic 3, H412	Expert judgment

Full text of abbreviated H

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.H412 Harmful to aquatic life with long lasting effects.

Full text of classifications

[CLP/GHS]

: Aquatic Chronic 2, H411 LONG-TERM AQUATIC HAZARD - Category 2 Aquatic Chronic 3, H412 LONG-TERM AQUATIC HAZARD - Category 3

Eye Irrit. 2, H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2

Skin Irrit. 2, H315 SKIN CORROSION/IRRITATION - Category 2

Skin Sens. 1, H317 SKIN SENSITIZATION - Category 1

Full text of abbreviated R

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.

R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the

aquatic environment.

Full text of classifications

[DSD/DPD]

Xi - Irritant

N - Dangerous for the environment

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SECTION 16: Other information

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THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

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