

MATERIAL SAFETY DATA SHEET

Regulation (EC) N. 1907/2006 - REACH

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: **ARALDITE AY 103**

Product code: **02012501-05-25**

Use: **Resin for adhesive systems**

Revision date: **21.03.2009**

Version: **1**

Distributor: **C.T.S. S.r.l. – Via Piave N 20/22 - 36077 ALTAVILLA VICENTINA (VI) - ITALY**
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Emergency telephone number: **+39 0444 349088**

2. HAZARDS IDENTIFICATION

Irritating to eyes and skin.

May cause sensitization by skin contact.

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature

Modified bisphenol A epoxy resin preparation

Hazardous components

Chemical Name	CAS-No.	Symbol(s)	R-phrases	Concentration [%]
reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight < 700)	25068-38-6	Xi, N	R36/38 R43 R51/53	75.00 - 85.00

4. FIRST AID MEASURES

Inhalation : Move to fresh air.
Call a physician immediately.

Eye contact : Rinse immediately with plenty of water for at least 15 minutes.
If eye irritation persists, consult a specialist.

Skin contact : Wash off with soap and plenty of water.
If skin irritation persists, call a physician.

Ingestion : Immediately give plenty of water (if possible charcoal slurry).
Obtain medical attention.
Do not induce vomiting.



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5. FIRE FIGHTING MEASURES

Suitable extinguishing media:

Water spray. Carbon dioxide (CO₂). Foam. Dry powder.

Extinguishing media which must not be used for safety reasons:

High volume water jet.

Special protective equipment for fire-fighters:

Wear self-contained breathing apparatus and protective suit.

Further information:

Burning produces obnoxious and toxic fumes. Carbon oxides.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Keep away from sources of ignition - No smoking.
Avoid contact with skin, eyes and clothing.
Do not breathe vapours/dust.

Environmental precautions : Prevent product from entering drains.
Do not contaminate surface water.
Avoid subsoil penetration.

Methods for cleaning up : Soak up with inert absorbent material and dispose of as hazardous waste.

7. HANDLING AND STORAGE

Handling

Advice on safe handling :

irritating

Provide sufficient air exchange and/or exhaust in work rooms.

Avoid formation of aerosol.

Ensure adequate ventilation.

Handle and open container with care.

Storage

Further information on storage conditions:

Keep away from food, drink and animal feeding stuffs.

Keep container tightly closed.

Keep at temperatures between 2 and 40 °C.

Storage hazard class Huntsman Advanced Materials:

Storage class 10, Environmentally hazardous liquids

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Control parameters	Update	Basis
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Engineering measures

No special precautions required.

Personal protective equipment

Respiratory protection : In case of insufficient ventilation wear suitable respiratory equipment.
Filter type AX-P2 (organic vapours, particles).

Eye protection : Tightly fitting safety goggles.
Face-shield.

Hand protection : Material of gloves for long term application (BTT>480 min):
 Butyl rubber
 Ethyl Vinyl Alcohol Laminate (EVAL)
 Material of gloves for short term/splash application (10 min<BTT<480 min):
 Nitrile rubber
 Neoprene rubber
 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.

Skin and body protection: Protective suit.
 Safety shoes.

Protective measures : Avoid contact with skin, eyes and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form : liquid
 Colour : yellow
 Odour : slight
 Boiling point : >200 °C
 Thermal decomposition : >200 °C
 Flash point : >200 °C
 Method: estimated
 Vapour pressure : <0.01 Pa at 20 °C
 Density : 1.12 g/cm³ at 25 °C
 Water solubility : at 20 °C Note: practically insoluble
 Miscibility with water : immiscible at 20 °C
 Viscosity, dynamic : 1.800 – 2.200 mPa.s at 25 °C

10. STABILITY AND REACTIVITY

Conditions to avoid : Note: Take necessary action to avoid static electricity discharge.
 Materials to avoid : Strong acids and strong bases.
 Strong oxidizing agents.
 Hazardous decomposition products: Carbon oxides. Burning produces obnoxious and toxic fumes.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : LD50 rat
 Dose: > 5,000 mg/kg

Eye irritation : irritating
 Rabbit

Skin irritation : irritating
 rabbit
 dermal

Sensitization : Causes sensitization.
 guinea pig
 dermal

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

Biodegradability :

Result: Not readily biodegradable.

Ecotoxicity effects

Further information on ecology

Additional ecological information:

Avoid subsoil penetration.

Prevent product from entering drains.

Do not contaminate surface water.

13. DISPOSAL CONSIDERATIONS

Product : Waste Key Number: 070208
Must be incinerated, when in compliance with local regulations.

Container : Empty containers can be landfilled after cleaning, when in compliance with the Environmental Protection (Duty of Care) Regulations 1991.

14. TRANSPORT INFORMATION

Land transport

ADR:

UN-No: 3082
Class: 9
Classification code: M6
Packaging group: III
Risk No.: 90
ADR/RID-Labels: 9
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
contains: BISPHENOL A EPOXY RESIN

RID:

UN-No: 3082
Class: 9
Packaging group: III
Risk No.: 90
ADR/RID-Labels: 9
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
contains: BISPHENOL A EPOXY RESIN

Sea transport

IMDG:

UN-No: 3082
Class: 9
Packaging group: III
ADR/RID-Labels: 9
MFAG:
EmS: F-A S-F
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
contains: (BISPHENOL A EPOXY RESIN)

Air transport

IATA-DGR:

UN/ID No.:	UN 3082
Class:	9
Packaging group:	III
Packing instruction (cargo aircraft):	914
Max. Qty/Pack.:	450.00 L
(999.00 = No limit)	
Packing instruction (passenger aircraft):	914
Max. Qty/Pack.:	450.00 L
(999.00 = No limit)	
ADR/RID-Labels:	9
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
contains:	(BISPHENOL A EPOXY RESIN)

15. REGULATORY INFORMATION

Labelling according to EEC Directive

Labelling required

Symbol(s):

N Dangerous for the environment
Xi Irritant

R-phrase(s) :

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

S-phrase(s) :

S28 After contact with skin, wash immediately with plenty of soap and water.
S37/39 Wear suitable gloves and eye/face protection.
S61 Avoid release to the environment. Refer to special instructions/safety data sheets.

Exceptional labelling of special preparations:

Contains epoxy constituents. See information supplied by the manufacturer.

Hazardous components which must be listed on the label:

reaction product: bisphenol A-(epichlorhydrin); epoxy resin (number average molecular weight < 700)

National legislation

Notification status

: EINECS yes
: TSCA yes
: DSL yes
: AICS yes
: KECI (KR) yes
: JEX (JP) yes

16. OTHER INFORMATION

List of R-phrases (Section 3)

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

This product must be stored, handled and used in accordance to the good industrial hygiene practice and in conformity of the legislations in force. Recommendations indicated are based on our knowledge and are intended to describe our products from the safety point of view. This information, therefore, can not been considered a warranty of the specific properties.

MATERIAL SAFETY DATA SHEET
(Directive 2001/58/EC)

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: **HARDENER HY 991** Product code: **02012600-700-800-900**
Revision date: **29.05.2006** Version: **1**
Distributor: **C.T.S. S.r.l. – Via Piave N 20/22 - 36077 ALTAVILLA VICENTINA (VI) - ITALY**
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Emergency telephone number: **+39 0444 349088**

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Formulated polyaminoamide, preparation

3. HAZARDS IDENTIFICATION

Irritating to eyes and skin. May cause sensitization by skin contact.

4. FIRST AID MEASURES

Inhalation: Move to fresh air.
Call a physician immediately.

Eye contact: Rinse immediately with plenty of water for at least 15 minutes.
If eye irritation persists, consult a specialist.

Skin contact: Wash off with soap and plenty of water.
If skin irritation persists, call a physician.

Ingestion: Immediately give plenty of water (if possible charcoal slurry).
Do not induce vomiting.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media:
Water spray. Carbon dioxide (CO₂). Foam. Dry powder.

Extinguishing media which must not be used for safety reasons:
High volume water jet.

Specific hazards during fire fighting:
Burning produces obnoxious and toxic fumes. Carbon oxides.

Special protective equipment for fire-fighters:
Wear self-contained breathing apparatus and protective suit.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:
Do not breathe vapours/dust.
Avoid contact with skin, eyes and clothing.
Ensure adequate ventilation.

Environmental precautions:

Do not allow material to contaminate ground water system.

Methods for cleaning up:

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

7. HANDLING AND STORAGE**Handling****Advice on safe handling:**

Provide sufficient air exchange and/or exhaust in work rooms. Handle and open container with care.

Storage**Further information on storage conditions:**

Keep away from food, drink and animal feeding stuffs. Keep container tightly closed. Store at room temperature in the original container.

Storage hazard class Huntsman Advanced Materials:

Storage class 12, Liquids, not dangerous

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with exposure limit values**

Components	CAS-No.	Control parameters	Update	Basis
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Project data:

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment:**Respiratory protection:**

In case of hazardous smokes, use integrated respiratory equipment.

Eye protection :

Goggles with lateral protection.

Hand protection :

Gum or plastic gloves.

Skin and body protection:

Long sleeved clothing.

Hygiene measures:

Keep away from food, drink and animal feeding stuffs. Wash hands before breaks and immediately after handling the product.

Protective measures:

Avoid contact with skin, eyes and clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	liquid
Colour:	amber
Boiling range:	>200 °C
Thermal decomposition:	>200 °C

Flash point: >150 °C Method: DIN 51758 (Pensky-Martens Closed Cup)
Vapour pressure: <0.8 Pa at 25 °C
Density: 0.95 g/cm³ at 25 °C
Water solubility: at 20 °C Note: soluble
Viscosity, dynamic: 20 - 60 mPa.s at 25 °C

10. STABILITY AND REACTIVITY

Conditions to avoid:

Note: Take necessary action to avoid static electricity discharge.

Materials to avoid:

Strong acids and strong bases. Strong oxidizing agents.

Hazardous decomposition products:

Carbon oxides. Burning produces obnoxious and toxic fumes.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity:

LD50 rat Dose: > 5.000 mg/kg

Eye irritation:

No eye irritation on rabbit

Skin irritation:

Irritating on rabbit dermal

Sensitization:

Causes sensitization on guinea-pigs. Cavy.

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability):

Not readily biodegradable.

Ecotoxicity effects.

Further information on ecology:

Avoid subsoil penetration. Prevent product from entering drains. Do not contaminate surface water.

13. TRANSPORT INFORMATION

Land transport:

ADR: Not dangerous goods - transport in full tank

RID: Not dangerous goods - transport in full tank

Sea transport:

IMDG: Not dangerous goods - transport in full tank

Air transport:

IATA-DGR: Not dangerous goods - transport in full tank

15. REGULATORY INFORMATION

Labelling according to EEC Directive

Labelling required

Symbol(s): Xi

Irritant

R-phrases(s) : R36/38

Irritating to eyes and skin.

R43

May cause sensitization by skin contact.

S-phrase(s) : S24/25

Avoid contact with skin and eyes.

Hazardous components which must be listed on the label:

triethylenetetramine

National legislation.

Notification status.

16. OTHER INFORMATION

This product must to be stored, handled and used according to suitable working practices of industrial hygiene ad according to legislation in force. Information reported is based on our actual knowledge and is intended to describe the product on the safety point of view. This document must not be considered as a warranty of the specific properties.

