

SAFETY DATA SHEET



Torr Seal-Hysol IC A-B

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

1.1 Product identifier

Product name : Torr Seal-Hysol IC A-B

Part No. (Kit) : 9530001, 9530002, 9530004

Part No. : Part A - RESIN Part A
Part B - HARDENER Part B

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

Identified uses
Analytical chemistry.
9530001: Part A - RESIN 82 g / Part B - HARDENER 36 g 9530002, 9530004 (Cartridge): Part A - RESIN & Part B - HARDENER: 56.7 g

1.3 Details of the supplier of the safety data sheet

Agilent Technologies Manufacturing GmbH & Co. KG
Hewlett-Packard-Str. 8
76337 Waldbronn
Germany
0800 603 1000

e-mail address of person responsible for this SDS : pdl-msds_author@agilent.com

1.4 Emergency telephone number

Emergency telephone number (with hours of operation) : CHEMTREC®: +(44)-870-8200418

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Part A - RESIN Mixture
Part B - HARDENER Mixture

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

Part A - RESIN

H315 SKIN CORROSION/IRRITATION - Category 2
H319 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2
H317 SKIN SENSITIZATION - Category 1
H411 LONG-TERM AQUATIC HAZARD - Category 2

Part B - HARDENER

H314 SKIN CORROSION/IRRITATION - Category 1B
H317 SKIN SENSITIZATION - Category 1
H350 CARCINOGENICITY - Category 1A
H361f TOXIC TO REPRODUCTION (Fertility) - Category 2
H371 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 2

Ingredients of unknown toxicity : Part A - RESIN Not applicable.
Part B - HARDENER Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 20%

Ingredients of unknown ecotoxicity : Part A - RESIN Not applicable.
Part B - HARDENER Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 20%

SECTION 2: Hazards identification

Storage	: Part A - RESIN Part B - HARDENER	Not applicable. P405 - Store locked up.
Disposal	: Part A - RESIN Part B - HARDENER	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazardous ingredients	: Part A - RESIN Reaction product: Bisphenol-A-(Epichlorhydrin); epoxy resin Part B - HARDENER 2,2'-Iminodiethylamine Quartz (SiO ₂) Bisphenol A	
Supplemental label elements	: Part A - RESIN Part B - HARDENER	Not applicable. Not applicable.
<u>Special packaging requirements</u>		
Tactile warning of danger	: Part A - RESIN Part B - HARDENER	Not applicable. Not applicable.

2.3 Other hazards

Other hazards which do not result in classification	: Part A - RESIN Part B - HARDENER	None known. Causes digestive tract burns.
--	---------------------------------------	--

SECTION 3: Composition/information on ingredients

Substance/mixture	: Part A - RESIN Part B - HARDENER	Mixture Mixture
--------------------------	---------------------------------------	--------------------

Product/ingredient name	Identifiers	%	<u>Classification</u>		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
Part A - RESIN Reaction product: Bisphenol-A-(Epichlorhydrin); epoxy resin	EC: 500-033-5 CAS: 25068-38-6 Index: 603-074-00-8	>=50 - <75	Xi; R36/38 R43 N; R51/53	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	[1]
Part B - HARDENER Quartz (SiO ₂)	EC: 238-878-4 CAS: 14808-60-7	>=20 - <25	Carc. Cat. 1; R49	Carc. 1A, H350 STOT SE 2, H371 (lungs) (inhalation)	[1]
2,2'-Iminodiethylamine	EC: 203-865-4 CAS: 111-40-0 Index: 612-058-00-X	>=20 - <25	Xn; R21/22 C; R34 R43	Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1B, H314 Skin Sens. 1, H317	[1]
Bisphenol A	EC: 201-245-8 CAS: 80-05-7 Index: 604-030-00-0	>=5 - <10	Repr. Cat. 3; R62 Xi; R41, R37 R43 R52	Eye Dam. 1, H318 Skin Sens. 1, H317 Repr. 2, H361f (Fertility) STOT SE 3, H335 (Respiratory tract irritation)	[1] [2]
			See Section 16 for the full text of the R-phrases declared above.	See Section 16 for the full text of the H statements declared above.	

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Type

SECTION 3: Composition/information on ingredients

- [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

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact	: Part A - RESIN	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.
	Part B - HARDENER	Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.
Inhalation	: Part A - RESIN	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.
	Part B - HARDENER	Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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. 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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Skin contact	: Part A - RESIN	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.
	Part B - HARDENER	Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

SECTION 4: First aid measures

Ingestion	: Part A - RESIN	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.
	Part B - HARDENER	Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician. 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	: Part A - RESIN	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.
	Part B - HARDENER	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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.

4.2 Most important symptoms and effects, both acute and delayed**Potential acute health effects**

Eye contact	: Part A - RESIN	Causes serious eye irritation.
	Part B - HARDENER	Causes serious eye damage.
Inhalation	: Part A - RESIN	No known significant effects or critical hazards.
	Part B - HARDENER	May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Skin contact	: Part A - RESIN	Causes skin irritation. May cause an allergic skin reaction.
	Part B - HARDENER	Causes severe burns. May cause an allergic skin reaction.
Ingestion	: Part A - RESIN	Irritating to mouth, throat and stomach.
	Part B - HARDENER	Corrosive to the digestive tract. Causes burns. May cause burns to mouth, throat and stomach.

Over-exposure signs/symptoms

SECTION 4: First aid measures

Eye contact	: Part A - RESIN	Adverse symptoms may include the following: pain or irritation watering redness
	Part B - HARDENER	Adverse symptoms may include the following: pain watering redness
Inhalation	: Part A - RESIN	No specific data.
	Part B - HARDENER	Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
Skin contact	: Part A - RESIN	Adverse symptoms may include the following: irritation redness
	Part B - HARDENER	Adverse symptoms may include the following: pain or irritation redness blistering may occur reduced foetal weight increase in foetal deaths skeletal malformations
Ingestion	: Part A - RESIN	No specific data.
	Part B - HARDENER	Adverse symptoms may include the following: stomach pains reduced foetal weight increase in foetal deaths skeletal malformations

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	: Part A - RESIN	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Part B - HARDENER	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Specific treatments	: Part A - RESIN	No specific treatment.
	Part B - HARDENER	No specific treatment.

SECTION 5: Firefighting measures**5.1 Extinguishing media**

Suitable extinguishing media	: Part A - RESIN	Use an extinguishing agent suitable for the surrounding fire.
	Part B - HARDENER	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: Part A - RESIN	None known.
	Part B - HARDENER	None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	: Part A - RESIN	In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic 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.
	Part B - HARDENER	In a fire or if heated, a pressure increase will occur and the container may burst.

SECTION 5: Firefighting measures

Hazardous combustion products	: Part A - RESIN	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds
	Part B - HARDENER	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides metal oxide/oxides
5.3 Advice for firefighters		
Special precautions for fire-fighters	: Part A - RESIN	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.
	Part B - HARDENER	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	: Part A - RESIN	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.
	Part B - HARDENER	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.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	: Part A - RESIN	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.
	Part B - HARDENER	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. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	: Part A - RESIN	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".
	Part B - HARDENER	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	: Part A - RESIN	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. Collect spillage.
	Part B - HARDENER	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant

SECTION 6: Accidental release measures

authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Part A - RESIN

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.

Part B - HARDENER

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.

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

7.1 Precautions for safe handling

Protective measures : Part A - RESIN

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.

Part B - HARDENER

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. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. 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

: Part A - RESIN

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.

Part B - HARDENER

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.

SECTION 7: Handling and storage**7.2 Conditions for safe storage, including any incompatibilities**

: Part A - RESIN

Store between the following temperatures: 15 to 60°C (59 to 140°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.

Part B - HARDENER

Store between the following temperatures: 15 to 60°C (59 to 140°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. Store locked up. 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.

7.3 Specific end use(s)**Recommendations**

: Part A - RESIN

Industrial applications, Professional applications.

Part B - HARDENER

Industrial applications, Professional applications.

Industrial sector specific solutions

: Not applicable.

SECTION 8: Exposure controls/personal protection**8.1 Control parameters****Occupational exposure limits**

Product/ingredient name	Exposure limit values
Part B - HARDENER Bisphenol A	EU OEL (Europe, 12/2009). Notes: list of indicative occupational exposure limit values TWA: 10 mg/m ³ 8 hours. Form: (inhalable dust)

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

No DNELs available.

Predicted effect concentrations

No PNECs available.

8.2 Exposure controls**Appropriate engineering controls**

: If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures

SECTION 8: Exposure controls/personal protection

- 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 and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.
- 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.
- 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** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. 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.
- 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	: Part A - RESIN	Liquid. [Viscous liquid.]
	Part B - HARDENER	Liquid. [Viscous liquid.]
Colour	: Part A - RESIN	White.
	Part B - HARDENER	Beige.
Odour	: Part A - RESIN	Mild.
	Part B - HARDENER	Ammoniacal.
Odour threshold	: Part A - RESIN	Not available.
	Part B - HARDENER	Not available.
pH	: Part A - RESIN	Not available.
	Part B - HARDENER	>7
Melting point/freezing point	: Part A - RESIN	Not available.
	Part B - HARDENER	Not available.
Initial boiling point and boiling range	: Part A - RESIN	>150°C
	Part B - HARDENER	207°C
Flash point	: Part A - RESIN	>93°C
	Part B - HARDENER	>101.6°C
Evaporation rate	: Part A - RESIN	Not available.
	Part B - HARDENER	Not available.
Flammability (solid, gas)	: Part A - RESIN	Not applicable.
	Part B - HARDENER	Not applicable.
Upper/lower flammability or explosive limits	: Part A - RESIN	Not available.
	Part B - HARDENER	Not available.

SECTION 9: Physical and chemical properties

Vapour pressure	: Part A - RESIN	Not available.
	Part B - HARDENER	Not available.
Vapour density	: Part A - RESIN	Not available.
	Part B - HARDENER	Not available.
Relative density	: Part A - RESIN	Not available.
	Part B - HARDENER	Not available.
Solubility(ies)	: Part A - RESIN	Very slightly soluble in the following materials: acetone. Insoluble in the following materials: cold water and hot water.
	Part B - HARDENER	Partially soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: Part A - RESIN	Not available.
	Part B - HARDENER	Not available.
Auto-ignition temperature	: Part A - RESIN	Not available.
	Part B - HARDENER	Not available.
Decomposition temperature	: Part A - RESIN	Not available.
	Part B - HARDENER	Not available.
Viscosity	: Part A - RESIN	Not available.
	Part B - HARDENER	Not available.
Explosive properties	: Part A - RESIN	Not available.
	Part B - HARDENER	Not available.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	: Part A - RESIN	No specific test data related to reactivity available for this product or its ingredients.
	Part B - HARDENER	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	: Part A - RESIN	The product is stable.
	Part B - HARDENER	The product is stable.
10.3 Possibility of hazardous reactions	: Part A - RESIN	Under normal conditions of storage and use, hazardous reactions will not occur.
	Part B - HARDENER	Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid	: Part A - RESIN	oxidising agents, Alcohol and amines
	Part B - HARDENER	Oxidisers, Al, Cu, Alloying agents
10.5 Incompatible materials	: Part A - RESIN	No specific data.
	Part B - HARDENER	No specific data.
10.6 Hazardous decomposition products	: Part A - RESIN	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
	Part B - HARDENER	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity**

SECTION 11: Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
Part A - RESIN Reaction product: Bisphenol-A-(Epichlorhydrin); epoxy resin	LD50 Oral	Rat	11.4 g/kg	-
Part B - HARDENER 2,2'-Iminodiethylamine	LD50 Dermal	Rabbit	1090 mg/kg	-
	LD50 Oral	Rat	1080 mg/kg	-
Bisphenol A	LD50 Oral	Rat	1200 mg/kg	-

Acute toxicity estimates

Route	ATE value
Part B - HARDENER Oral	4320 mg/kg
Dermal	4360 mg/kg

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Part A - RESIN Reaction product: Bisphenol-A-(Epichlorhydrin); epoxy resin	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 milligrams	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 microliters	-
	Skin - Severe irritant	Rabbit	-	24 hours 2 milligrams	-
Part B - HARDENER 2,2'-Iminodiethylamine	Skin - Moderate irritant	Rabbit	-	500 milligrams	-
Bisphenol A	Eyes - Severe irritant	Rabbit	-	24 hours 250 Micrograms	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 milligrams	-
	Skin - Mild irritant	Rabbit	-	250 milligrams	-

Sensitiser**Conclusion/Summary** : Not available.Chronic toxicity / Carcinogenicity / Mutagenicity / Teratogenicity / Reproductive toxicity

Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Part B - HARDENER Quartz (SiO ₂) Bisphenol A	Category 2 Category 3	Inhalation Not applicable.	lungs Respiratory tract irritation

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

SECTION 11: Toxicological information

Inhalation	: Part A - RESIN Part B - HARDENER	No known significant effects or critical hazards. May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion	: Part A - RESIN Part B - HARDENER	Irritating to mouth, throat and stomach. Corrosive to the digestive tract. Causes burns. May cause burns to mouth, throat and stomach.
Skin contact	: Part A - RESIN Part B - HARDENER	Causes skin irritation. May cause an allergic skin reaction. Causes severe burns. May cause an allergic skin reaction.
Eye contact	: Part A - RESIN Part B - HARDENER	Causes serious eye irritation. Causes serious eye damage.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation	: Part A - RESIN Part B - HARDENER	No specific data. Adverse symptoms may include the following: reduced foetal weight increase in foetal deaths skeletal malformations
Ingestion	: Part A - RESIN Part B - HARDENER	No specific data. Adverse symptoms may include the following: stomach pains reduced foetal weight increase in foetal deaths skeletal malformations
Skin contact	: Part A - RESIN Part B - HARDENER	Adverse symptoms may include the following: irritation redness Adverse symptoms may include the following: pain or irritation redness blistering may occur reduced foetal weight increase in foetal deaths skeletal malformations
Eye contact	: Part A - RESIN Part B - HARDENER	Adverse symptoms may include the following: pain or irritation watering redness Adverse symptoms may include the following: pain 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 effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General	: Part A - RESIN Part B - HARDENER	Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
----------------	---------------------------------------	--

SECTION 11: Toxicological information

Carcinogenicity	: Part A - RESIN Part B - HARDENER	No known significant effects or critical hazards. May cause cancer. Risk of cancer depends on duration and level of exposure.
Mutagenicity	: Part A - RESIN Part B - HARDENER	No known significant effects or critical hazards. No known significant effects or critical hazards.
Teratogenicity	: Part A - RESIN Part B - HARDENER	No known significant effects or critical hazards. No known significant effects or critical hazards.
Developmental effects	: Part A - RESIN Part B - HARDENER	No known significant effects or critical hazards. No known significant effects or critical hazards.
Fertility effects	: Part A - RESIN Part B - HARDENER	No known significant effects or critical hazards. Suspected of damaging fertility.
Toxicokinetics		
Absorption	: Part A - RESIN Part B - HARDENER	Not available. Not available.
Distribution	: Part A - RESIN Part B - HARDENER	Not available. Not available.
Metabolism	: Part A - RESIN Part B - HARDENER	Not available. Not available.
Elimination	: Part A - RESIN Part B - HARDENER	Not available. Not available.
Other information	: Not available.	

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Part B - HARDENER 2,2'-Iminodiethylamine	Acute EC50 345600 µg/l Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute LC50 53500 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 332 mg/l Fresh water	Fish	96 hours
	Chronic NOEC 5.6 mg/l	Daphnia	21 days
	Chronic NOEC 10 mg/l Marine water	Fish	28 days
Bisphenol A	Acute EC50 1000 µg/l Marine water	Algae - Skeletonema costatum	96 hours
	Acute EC50 7.75 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 1.34 mg/l Marine water	Crustaceans - Americamysis bahia - Larvae	48 hours
	Acute LC50 4600 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 30 µg/l Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Chronic NOEC 0.2 to 20 ppb Fresh water	Fish - Xiphophorus helleri - Juvenile (Fledgling, Hatchling, Weanling)	60 days

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Part B - HARDENER 2,2'-Iminodiethylamine	-	80 to 90 % - Inherent - 30 days	-	20 mg/l Activated sludge
Bisphenol A	OECD 301 301F Ready Biodegradability - Manometric Respirometry Test	>=76 % - Readily - 28 days	-	25 mg/l Activated sludge

Torr Seal-Hysol IC A-B

SECTION 12: Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Part B - HARDENER 2,2'-Iminodiethylamine Bisphenol A	Marine water 2 to 4 days -	- -	- Readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Part B - HARDENER 2,2'-Iminodiethylamine Bisphenol A	-5.58 3.4	2.8 to 6.3 20 to 67	low low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

PBT : Not applicable.

vPvB : Not applicable.

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

SECTION 13: Disposal considerations**13.1 Waste treatment methods**Product

Methods of disposal : 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.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

European waste catalogue (EWC)

Waste code	Waste designation
Part A - RESIN 08 04 09*	waste adhesives and sealants containing organic solvents or other dangerous substances
Part B - HARDENER 08 04 09*	waste adhesives and sealants containing organic solvents or other dangerous substances

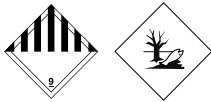
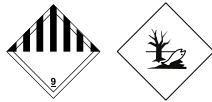

Packaging

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.

SECTION 14: Transport information

Additional information : **Special provisions**
251, 340

	ADR/RID	IMDG	IATA
14.1 UN number	UN3316	UN3316	UN3316
14.2 UN proper shipping name	CHEMICAL KIT	CHEMICAL KIT. Marine pollutant (Reaction product: Bisphenol-A-(Epichlorhydrin); epoxy resin)	Chemical kit
14.3 Transport hazard class(es)	9 	9 	9 
14.4 Packing group	II	II	II
14.5 Environmental hazards	Yes.	Yes.	No.
14.6 Special precautions for user	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.	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.	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.
Additional information	<p>The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.</p> <p><u>Hazard identification number</u> 90</p> <p><u>Limited quantity</u> 0</p> <p><u>Special provisions</u> 251 340</p> <p><u>Tunnel code</u> (E)</p>	<p>The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.</p> <p><u>Emergency schedules (EmS)</u> F-A, _S-P_</p> <p><u>Special provisions</u> 251, 340</p>	<p>The environmentally hazardous substance mark may appear if required by other transportation regulations.</p> <p><u>Passenger and Cargo Aircraft</u>Quantity limitation: 10 kg Packaging instructions: 960</p> <p><u>Cargo Aircraft Only</u> Quantity limitation: 10 kg Packaging instructions: 960</p> <p><u>Limited Quantities - Passenger Aircraft</u> Quantity limitation: 1 kg Packaging instructions: Y960</p> <p><u>Special provisions</u> A44, A163</p>

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

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)

Annex XIV - List of substances subject to authorisation

Substances of very high concern

None of the components are listed.

Annex XVII - : Restricted to professional users.

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.

Black List Chemicals : Not listed

Priority List Chemicals : Not listed

Integrated pollution prevention and control list (IPPC) - Air : Not listed

Integrated pollution prevention and control list (IPPC) - Water : Not listed

Product/ingredient name	Carcinogenic effects	Mutagenic effects	Developmental effects	Fertility effects
Part B - HARDENER Quartz (SiO ₂) Bisphenol A	Carc. 1A, H350 -	- -	- -	- Repr. 2, H361f (Fertility)

15.2 Chemical Safety Assessment : This product contains substances for which Chemical Safety Assessments might still be 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
Part A - RESIN Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	Calculation method Calculation method Calculation method Calculation method
Part B - HARDENER Skin Corr. 1B, H314 Skin Sens. 1, H317 Carc. 1A, H350 Repr. 2, H361f (Fertility) STOT SE 2, H371	Calculation method Calculation method Calculation method Calculation method Calculation method

SECTION 16: Other information**Full text of abbreviated H statements** : **Part A - RESIN**

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.

Part B - HARDENER

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335 (Respiratory tract irritation)	May cause respiratory irritation. (Respiratory tract irritation)
H350	May cause cancer.
H361f (Fertility)	Suspected of damaging fertility.
H371	May cause damage to organs.
H371 (lungs) (inhalation)	May cause damage to organs if inhaled. (lungs)

Full text of classifications [CLP/GHS] : **Part A - RESIN**

Aquatic Chronic 2, H411	LONG-TERM AQUATIC HAZARD - Category 2
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

Part B - HARDENER

Acute Tox. 4, H302	ACUTE TOXICITY (oral) - Category 4
Acute Tox. 4, H312	ACUTE TOXICITY (dermal) - Category 4
Carc. 1A, H350	CARCINOGENICITY - Category 1A
Eye Dam. 1, H318	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
Repr. 2, H361f (Fertility)	TOXIC TO REPRODUCTION (Fertility) - Category 2
Skin Corr. 1B, H314	SKIN CORROSION/IRRITATION - Category 1B
Skin Sens. 1, H317	SKIN SENSITIZATION - Category 1
STOT SE 2, H371	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 2
STOT SE 2, H371 (lungs) (inhalation)	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (lungs) (inhalation) - Category 2
STOT SE 3, H335 (Respiratory tract irritation)	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

Full text of abbreviated R phrases : **Part A - RESIN****Part B - HARDENER**

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.
R49- May cause cancer by inhalation.
R62- Possible risk of impaired fertility.
R21/22- Also harmful in contact with skin and if swallowed.
R34- Causes burns.
R41- Risk of serious damage to eyes.
R37- Irritating to respiratory system.
R43- May cause sensitisation by skin contact.
R52- Harmful to aquatic organisms.

Full text of classifications [DSD/DPD] : **Part A - RESIN****Part B - HARDENER**

Xi - Irritant
N - Dangerous for the environment
Carc. Cat. 1 - Carcinogen category 1
Repr. Cat. 3 - Toxic to reproduction category 3
C - Corrosive
Xn - Harmful
Xi - Irritant

Date of issue/ Date of revision : 21/08/2014

Date of previous issue : 04/08/2011.

Version : 2

Torr Seal-Hysol IC A-B

SECTION 16: Other information

[Notice to reader](#)

Disclaimer: The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.