Conforms to US OSHA Hazard Communication 29CFR1910.1200

SAFETY DATA SHEET

Agilent Technologies

Torr Seal-Hysol IC A-B

Section 1. Identification

1.1 Product identifier

Product name : Torr Seal-Hysol IC A-B

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

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

Validation date : 08/21/2014.

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

Material 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

Supplier/Manufacturer : Agilent Technologies, Inc.
Logistics Center - Americas
500 Ships Landing Way
New Castle, Delaware 19720
800-227-9770

1.4 Emergency telephone number

In case of emergency : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

2.1 Classification of the substance or mixture

OSHA/HCS status : Part A - RESIN — This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Part B - HARDENER — This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

Part A - RESIN

H315	SKIN CORROSION/IRRITATION - Category 2
H319	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
H317	SKIN SENSITIZATION - Category 1
H335	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

Part B - HARDENER

H314	SKIN CORROSION/IRRITATION - Category 1B
H318	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
H317	SKIN SENSITIZATION - Category 1
H350	CARCINOGENICITY - Category 1A
H361	TOXIC TO REPRODUCTION (Fertility) - Category 2
H371	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 2

Section 2. Hazards identification

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

2.2 GHS label elements

Hazard pictograms :

Signal word : Part A - RESIN
Warning
Part B - HARDENER
Danger

Hazard statements : Part A - RESIN
H319 - Causes serious eye irritation.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H335 - May cause respiratory irritation.

Part B - HARDENER
H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.
H350 - May cause cancer.
H361 - Suspected of damaging fertility.
H371 - May cause damage to organs.

Precautionary statements

Prevention : Part A - RESIN
P280 - Wear protective gloves. Wear eye or face protection.
P271 - Use only outdoors or in a well-ventilated area.
P261 - Avoid breathing vapor.
P264 - Wash hands thoroughly after handling.
P272 - Contaminated work clothing should not be allowed out of the workplace.

Part B - HARDENER
P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P281 - Use personal protective equipment as required.
P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.
P260 - Do not breathe vapor.
P270 - Do not eat, drink or smoke when using this product.
P264 - Wash hands thoroughly after handling.
P272 - Contaminated work clothing should not be allowed out of the workplace.

Response : Part A - RESIN
P304 + P340 + P312 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.
P302 + P352 + P362-2 + P363 - IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse.
P333 + P313 - If skin irritation or rash occurs: Get medical attention.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Section 2. Hazards identification

	Part B - HARDENER	P337 + P313 - If eye irritation persists: Get medical attention. P309 + P311 - IF exposed or if you feel unwell: Call a POISON CENTER or physician. P304 + P340 + P310 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or physician. P301 + P310 + P330 + P331 - IF SWALLOWED: Immediately call a POISON CENTER or physician. Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353 + P363 + P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or physician. P302 + P352 - IF ON SKIN: Wash with plenty of soap and water. P333 + P313 - If skin irritation or rash occurs: Get medical attention. P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.
Storage	: Part A - RESIN	P405 - Store locked up.
	Part B - HARDENER	P405 - Store locked up.
Disposal	: Part A - RESIN	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
	Part B - HARDENER	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	: Part A - RESIN	None known.
	Part B - HARDENER	Do not taste or swallow. Wash thoroughly after handling.

2.3 Other hazards

Hazards not otherwise classified	: Part A - RESIN	None known.
	Part B - HARDENER	Causes digestive tract burns.

Section 3. Composition/information on ingredients

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

Ingredient name	%	CAS number
Part A - RESIN		
Reaction product: Bisphenol-A-(Epichlorhydrin); epoxy resin	30 - 60	25068-38-6
Part B - HARDENER		
Quartz (SiO2)	10 - 30	14808-60-7
2,2'-Iminodiethylamine	10 - 30	111-40-0
Bisphenol A	1 - 5	80-05-7

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Section 3. Composition/information on ingredients

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.

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

Section 4. First aid measures

4.1 Description of necessary 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 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. Get medical attention. If necessary, call a poison center or physician. 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.

Section 4. First aid measures

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.

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.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Part A - RESIN

Causes serious eye irritation.

Part B - HARDENER

Causes serious eye damage.

Section 4. First aid measures

Inhalation	:	Part A - RESIN	May cause respiratory irritation.
		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

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	Adverse symptoms may include the following: respiratory tract irritation coughing
		Part B - HARDENER	Adverse symptoms may include the following: reduced fetal weight increase in fetal 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 fetal weight increase in fetal deaths skeletal malformations
Ingestion	:	Part A - RESIN	No specific data.
		Part B - HARDENER	Adverse symptoms may include the following: stomach pains reduced fetal weight increase in fetal deaths skeletal malformations

4.3 Indication of immediate medical attention and special treatment needed, if necessary

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 4. First aid measures

Protection of first-aiders : Part A - RESIN

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.

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.

See toxicological information (Section 11)

Section 5. Fire-fighting 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

Specific hazards arising from the chemical : Part A - RESIN

In a fire or if heated, a pressure increase will occur and the container may burst.

Part B - HARDENER

In a fire or if heated, a pressure increase will occur and the container may burst.

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

carbon dioxide
carbon monoxide
nitrogen oxides
halogenated compounds
metal oxide/oxides

5.3 Advice for firefighters

Special protective actions 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.

Section 5. Fire-fighting measures

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.

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.

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 spilled material. Do not breathe vapor 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 :

Part A - RESIN: Avoid dispersal of spilled 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).

Part B - HARDENER: Avoid dispersal of spilled 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).

6.3 Methods and materials for containment and 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.

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 vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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

Section 7. Handling and storage

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 vapor 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 : 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.

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. 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 unlabeled 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 unlabeled 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

Ingredient name	Exposure limits
Part B - HARDENER Quartz (SiO2)	**OSHA PEL Z3 (United States, 2/2013).** TWA: 250 MPPCF / (%SiO2+5) 8 hours. Form: Respirable TWA: 10 MG/M3 / (%SiO2+2) 8 hours. Form: Respirable **OSHA PEL 1989 (United States, 3/1989).** TWA: 0.1 mg/m³, (as quartz) 8 hours. Form: Respirable dust **ACGIH TLV (United States, 6/2013).** TWA: 0.025 mg/m³ 8 hours. Form: Respirable fraction **NIOSH REL (United States, 10/2013).** TWA: 0.05 mg/m³ 10 hours. Form: respirable dust
2,2'-Iminodiethylamine	**ACGIH TLV (United States, 6/2013).** **Absorbed through skin.** TWA: 1 ppm 8 hours. TWA: 4.2 mg/m³ 8 hours. **OSHA PEL 1989 (United States, 3/1989).** TWA: 1 ppm 8 hours. TWA: 4 mg/m³ 8 hours. **NIOSH REL (United States, 10/2013).** **Absorbed through skin.** TWA: 1 ppm 10 hours. TWA: 4 mg/m³ 10 hours.

8.2 Exposure controls

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor 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.

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.

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 and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Section 8. Exposure controls/personal 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.

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.]
Color	:	Part A - RESIN	White.
		Part B - HARDENER	Beige.
Odor	:	Part A - RESIN	Mild.
		Part B - HARDENER	Ammoniacal.
Odor threshold	:	Part A - RESIN	Not available.
		Part B - HARDENER	Not available.
pH	:	Part A - RESIN	Not available.
		Part B - HARDENER	>7
Melting point	:	Part A - RESIN	Not available.
		Part B - HARDENER	Not available.
Boiling point	:	Part A - RESIN	>150°C (>302°F)
		Part B - HARDENER	207°C (404.6°F)
Flash point	:	Part A - RESIN	>93°C (>199.4 °F)
		Part B - HARDENER	>101.6°C (>241.88 °F)
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.
Lower and upper explosive (flammable) limits	:	Part A - RESIN	Not available.
		Part B - HARDENER	Not available.
Vapor pressure	:	Part A - RESIN	Not available.
		Part B - HARDENER	Not available.
Vapor density	:	Part A - RESIN	Not available.
		Part B - HARDENER	Not available.
Relative density	:	Part A - RESIN	Not available.
		Part B - HARDENER	Not available.

Section 9. Physical and chemical properties

Solubility	:	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.
Solubility in water	:	Not available.	
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.

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	No specific data.
		Part B - HARDENER	Oxidizing agents, 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	-

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	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Part B - HARDENER			
Quartz (SiO2)	-	1	Known to be a human carcinogen.

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

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Name	Category	Route of exposure	Target organs
Part A - RESIN			
Reaction product: Bisphenol-A-(Epichlorhydrin); epoxy resin	Category 3	Not applicable.	Respiratory tract irritation
Part B - HARDENER			
Quartz (SiO2)	Category 2	Inhalation	lungs
Bisphenol A	Category 3	Not applicable.	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

Eye contact : Part A - RESIN: Causes serious eye irritation.
Part B - HARDENER: Causes serious eye damage.

Inhalation : Part A - RESIN: May cause respiratory irritation.
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.

Symptoms related to the physical, chemical and toxicological characteristics

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: Adverse symptoms may include the following:
respiratory tract irritation
coughing

Part B - HARDENER: Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Section 11. Toxicological information

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 fetal weight increase in fetal deaths skeletal malformations
Ingestion	:	Part A - RESIN	No specific data.
		Part B - HARDENER	Adverse symptoms may include the following: stomach pains reduced fetal weight increase in fetal deaths skeletal malformations

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

Not available.

General	:	Part A - RESIN	Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
		Part B - HARDENER	Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity	:	Part A - RESIN	No known significant effects or critical hazards.
		Part B - HARDENER	May cause cancer. Risk of cancer depends on duration and level of exposure.
Mutagenicity	:	Part A - RESIN	No known significant effects or critical hazards.
		Part B - HARDENER	No known significant effects or critical hazards.
Teratogenicity	:	Part A - RESIN	No known significant effects or critical hazards.
		Part B - HARDENER	No known significant effects or critical hazards.
Developmental effects	:	Part A - RESIN	No known significant effects or critical hazards.
		Part B - HARDENER	No known significant effects or critical hazards.
Fertility effects	:	Part A - RESIN	No known significant effects or critical hazards.
		Part B - HARDENER	Suspected of damaging fertility.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Part B - HARDENER	
Oral	3526.5 mg/kg
Dermal	4360 mg/kg

Section 11. Toxicological information

Other information : Part A - RESIN — Not available.
Part B - HARDENER — 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

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

12.3 Bioaccumulative potential

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

12.4 Mobility in soil

Section 12. Ecological information

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

12.5 Other adverse effects : Part A - RESIN — No known significant effects or critical hazards.
Part B - HARDENER — No known significant effects or critical hazards.

Section 13. Disposal considerations

13.1 Waste treatment methods

Disposal methods : The generation of waste should be avoided or minimized 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. 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 spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

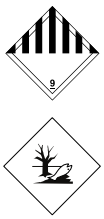
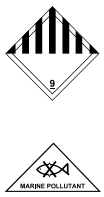
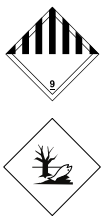
Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

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

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information

Section 14. Transport information

DOT	UN3316	Chemical kits. Marine pollutant (Reaction product: Bisphenol-A-(Epichlorhydrin); epoxy resin)	9	II		The marine pollutant mark is not required when transported on inland waterways in sizes of ≤5 L or ≤5 kg or by road, rail, or inland air in non-bulk sizes. **Limited quantity** Yes. **Packaging instruction** **Passenger aircraft** Quantity limitation: 10 kg **Cargo aircraft** Quantity limitation: 10 kg **Special provisions** 15
TDG	UN3316	CHEMICAL KIT. Marine pollutant (Reaction product: Bisphenol-A-(Epichlorhydrin); epoxy resin)	9	II		The marine pollutant mark is not required when transported by road or rail. **Explosive Limit and Limited Quantity Index** 0 **Passenger Carrying Road or Rail Index** 10 **Special provisions** 65
Mexico	UN3316	EQUIPO QUIMICO	9	II		**Special provisions** 251
IMDG	UN3316	CHEMICAL KIT. Marine pollutant (Reaction product: Bisphenol-A-(Epichlorhydrin); epoxy resin)	9	II		The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg. **Emergency schedules (EmS)** F-A, _S-P_ **Special provisions** 251, 340

Section 14. Transport information

IATA	UN3316	Chemical kit	9	II		The environmentally hazardous substance mark may appear if required by other transportation regulations. **Passenger and Cargo Aircraft** Quantity limitation: 10 kg Packaging instructions: 960 **Cargo Aircraft Only** Quantity limitation: 10 kg Packaging instructions: 960 **Limited Quantities - Passenger Aircraft** Quantity limitation: 1 kg Packaging instructions: Y960 **Special provisions** A44, A163

PG* : Packing group

Section 15. Regulatory information

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

U.S. Federal regulations : **United States inventory (TSCA 8b)**: All components are listed or exempted.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Immediate (acute) health hazard
Delayed (chronic) health hazard

Composition/information on ingredients

Section 15. Regulatory information

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Part A - RESIN						
Reaction product: Bisphenol-A-(Epichlorhydrin); epoxy resin	30 - 60	No.	No.	No.	Yes.	No.
Part B - HARDENER						
Quartz (SiO2)	10 - 30	No.	No.	No.	Yes.	Yes.
2,2'-Iminodiethylamine	10 - 30	No.	No.	No.	Yes.	No.
Bisphenol A	1 - 5	No.	No.	No.	Yes.	Yes.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	**Part B - HARDENER** Bisphenol A	80-05-7	1 - 5
Supplier notification	**Part B - HARDENER** Bisphenol A	80-05-7	1 - 5

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: SILICA, CRYSTALLINE, QUARTZ; DIETHYLENE TRIAMINE; 4,4'-ISOPROPYLIDENEDIPHENOL

New York : None of the components are listed.

New Jersey : The following components are listed: SILICA, QUARTZ; QUARTZ (SiO2); DIETHYLENE TRIAMINE; 1,2-ETHANEDIAMINE, N-(2-AMINOETHYL)-; BISPHENOL A; 4,4'-ISOPROPYLIDENEDIPHENOL

Pennsylvania : The following components are listed: QUARTZ (SIO2); 1,2-ETHANEDIAMINE, N-(2-AMINOETHYL)-; 4,4'-ISOPROPYLIDENEDIPHENOL

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Part B - HARDENER				
Quartz (SiO2)	Yes.	No.	No.	No.

Canada inventory : All components are listed or exempted.

International regulations

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: All components are listed or exempted.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): All components are listed or exempted.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Section 15. Regulatory information

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

Section 16. Other information

History

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Indicates information that has changed from previously issued version.

Notice to reader

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