

Product name: Torr Seal
Part no.: 9530001

This product is composed of the following:

Kit Components, Reagents

Box/Module Part number	Box/Module Name	Kit Component Part Number	Kit Component Name	Qty Units	GHS
-	-	Not available.	Agilent Torr Seal - part B - Hardener	1	Yes
-	-	Not available.	Agilent Torr Seal - part A - Epoxy Resin	1	Yes

Article SDSs, if maintained, are available on www.agilent.com. We recommend using the article product code when searching. SDSs are only available for a limited set of countries.

Transport Information for the Kit:

Dangerous Goods classification for: 9530001

DOT	IMDG	IATA
UN3316, Chemical kit, 9, II	UN3316, CHEMICAL KIT, 9, II	UN3316, Chemical kit, 9, II

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SDSs for each individual Kit component follow this cover sheet.

SAFETY DATA SHEET

Agilent Torr Seal - part A - Epoxy Resin

Section 1. Identification

GHS product identifier : Agilent Torr Seal - part A - Epoxy Resin

Part no. : Not available.

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

Identified uses : Analytical chemistry.
Sealants and adhesives
Tube
69.5 ml - 95 gr

Supplier/Manufacturer : Agilent Technologies, Inc.
5301 Stevens Creek Blvd
Santa Clara, CA 95051, USA
800-227-9770

Emergency telephone number (with hours of operation) : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

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

Classification of the substance or mixture

H315 SKIN IRRITATION - Category 2
H319 EYE IRRITATION - Category 2A
H317 SKIN SENSITIZATION - Category 1
H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
H411 AQUATIC HAZARD (LONG-TERM) - Category 2

GHS label elements

Hazard pictograms :



Signal word : Warning

Hazard statements : H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention : P280 - Wear protective gloves. Wear eye or face protection.
P273 - Avoid release to the environment.
P261 - Avoid breathing vapor.
P264 - Wash thoroughly after handling.

Section 2. Hazards identification

Response	: P391 - Collect spillage. P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell. P302 + P352 - IF ON SKIN: Wash with plenty of water. P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention. P362 + P364 - Take off contaminated clothing and wash it before reuse. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 - If eye irritation persists: Get medical advice or attention.
Storage	: P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
Disposal	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	: Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Other hazards	
Hazards not otherwise classified	: Polymerization is exothermic and can degenerate into an uncontrolled reaction.
Hazards identified when used	: No known significant effects or critical hazards.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	Synonyms	%	Identifiers
Reaction product: bisphenol-A-(epichlorohydrin); epoxy resin	-	≥30 - ≤60	CAS: 25068-38-6
Phenol, polymer with formaldehyde, glycidyl ether	-	≥10 - ≤30	CAS: 28064-14-4
2,2'-[methylenebis(p-phenyleneoxymethylene)]bisoxirane	2,2'-[Methylenebis[(4,1-phenylene)oxymethylene]]bis(oxirane)	≥0.1 - ≤1	CAS: 2095-03-6

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

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

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

Section 4. First aid measures

Description of necessary first aid measures

Eye contact	: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
Inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If 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.

Section 4. First aid measures

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

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : May cause respiratory irritation.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : No specific data.

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

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : 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

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

Section 5. Fire-fighting measures

- Specific hazards arising from the chemical** : Polymerization is exothermic and can degenerate into an uncontrolled reaction. 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.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
halogenated compounds
metal oxide/oxides
- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized 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".
- Environmental precautions** : 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). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Methods and materials for containment and cleaning up

- Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Avoid release to the environment. 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. Store and use away from heat, sparks, open flame or any other ignition source. Empty containers retain product residue and can be hazardous. Do not reuse container.

Section 7. Handling and storage

- 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.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a cool, well-ventilated area away from incompatible materials and ignition sources. 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. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Reaction product: bisphenol-A-(epichlorohydrin); epoxy resin	None.
Phenol, polymer with formaldehyde, glycidyl ether	None.
2,2'-[methylenebis(p-phenyleneoxymethylene)]bisoxirane	None.

Biological exposure indices

No exposure indices known.

- Appropriate engineering controls** : Use only with adequate ventilation. 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. Engineering controls may be required to control the primary or secondary risks associated with this product.
- 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.

Skin protection

Section 8. Exposure controls/personal protection

- Hand protection** : When used as intended with Agilent instruments, use of the product is not expected to result in direct contact with the chemical. However, in case of accidental contact with splash wear good quality:
- Glove material: Nitrile rubber
 Glove thickness: > 0.4 mm
 Breakthrough time: > 480 minutes
- Selection of a suitable glove depends not only on the material but also on other quality properties, which may vary from manufacturer to manufacturer.
 Consult your glove manufacturer for the exact breakthrough times and comply.
- 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** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

- Physical state** : Liquid.
- Color** : Off-white.
- Odor** : Mild.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point/freezing point** : Not available.
- Boiling point or initial boiling point and boiling range** : >260°C (>500°F)
- Flash point** : Open cup: >200°C (>392°F)
- Evaporation rate** : Not available.
- Flammability** : Not applicable.
- Lower and upper explosion limit/flammability limit** : Not available.
- Vapor pressure** :

Ingredient name	Vapor Pressure at 20°C			Vapor pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
reaction product: bisphenol-A-(epichlorohydrin); epoxy resin	<0	<0	EU A.4	-	-	-

- Relative vapor density** : Not available.
- Relative density** : 1.57
- Solubility(ies)** :

Media	Result
water	Insoluble

Section 9. Physical and chemical properties

Miscible with water	: No.
Partition coefficient: n-octanol/water	: Not applicable.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Dynamic (room temperature): Not available. Kinematic (room temperature): Not available. Kinematic (40°C (104°F)): Not available.

Particle characteristics

Median particle size	: Not applicable.
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Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product may not be stable under certain conditions of storage or use. See "Possibility of Hazardous Reactions" for further information.
Possibility of hazardous reactions	: Free radical initiators, peroxides, strongly alkaline and strongly acidic materials or reactive metals. Contact with these could result in uncontrolled exothermic polymerization. Hazardous reactions or instability may occur under certain conditions of storage or use.
Conditions to avoid	: No specific data.
Incompatible materials	: May react or be incompatible with oxidizing materials. Reactive or incompatible with the following materials: acids and alkalis. amines alcohols
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Conclusion/Summary [Product]	: Not available.
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Skin corrosion/irritation

Product/ingredient name	Result	
Reaction product: bisphenol-A-(epichlorohydrin); epoxy resin	Rabbit - Skin - Moderate irritant	Duration of treatment/ exposure: 24 hours 500 uL
	Rabbit - Skin - Severe irritant	Duration of treatment/ exposure: 24 hours 2 mg
Conclusion/Summary [Product]	: Not available.	

Serious eye damage/eye irritation

Result

Section 11. Toxicological information

Reaction product: bisphenol-A- (epichlorohydrin); epoxy resin Rabbit - Eyes - Mild irritant 100 mg

Conclusion/Summary : Not available.
[Product]

Respiratory corrosion/irritation

Product/ingredient name

Conclusion/Summary : Not available.
[Product]

Respiratory or skin sensitization

Skin

Conclusion/Summary : Not available.
[Product]

Respiratory

Conclusion/Summary : Not available.
[Product]

Germ cell mutagenicity

Conclusion/Summary : Not available.
[Product]

Carcinogenicity

Not available.

Conclusion/Summary : Not available.
[Product]

Reproductive toxicity

Conclusion/Summary : Not available.
[Product]

Specific target organ toxicity (single exposure)

Product/ingredient name

Result

reaction product: bisphenol-A- (epichlorohydrin); epoxy resin	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
Phenol, polymer with formaldehyde, glycidyl ether	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
2,2'-[methylenebis(p-phenyleneoxymethylene)]bisoxirane	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Section 11. Toxicological information

Potential acute health effects

Eye contact	: Causes serious eye irritation.
Inhalation	: May cause respiratory irritation.
Skin contact	: Causes skin irritation. May cause an allergic skin reaction.
Ingestion	: No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: Adverse symptoms may include the following: respiratory tract irritation coughing
Skin contact	: Adverse symptoms may include the following: irritation redness
Ingestion	: No specific data.

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

Conclusion/Summary [Product] : Not available.

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : ☒ No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

N/A

Section 12. Ecological information

Toxicity

Product/ingredient name
Result

reaction product: bisphenol-A-
(epichlorohydrin); epoxy resin

Acute - EC50 - Fresh water

9.4 mg/l [72 hours]

Conclusion/Summary : Not available.
[Product]

Persistence and degradability

Conclusion/Summary : Not available.
[Product]

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
reaction product: bisphenol-A- (epichlorohydrin); epoxy resin	-	-	Not readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
reaction product: bisphenol-A- (epichlorohydrin); epoxy resin	2.64 to 3.78	31	Low

Mobility in soil

Soil/Water partition coefficient : Not available.

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

Section 13. Disposal considerations

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.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	UN3082	UN3082	UN3082	UN3082	UN3082

Section 14. Transport information

UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. (reaction product: bisphenol-A-(epichlorohydrin); epoxy resin)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorohydrin); epoxy resin)	SUBSTANCIA LÍQUIDA PELIGROSA PARA EL MEDIO AMBIENTE, N.E.P. (reaction product: bisphenol-A-(epichlorohydrin); epoxy resin)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product: bisphenol-A-(epichlorohydrin); epoxy resin)	Environmentally hazardous substance, liquid, n. o.s. (reaction product: bisphenol-A-(epichlorohydrin); epoxy resin)
Transport hazard class(es)	9 	9 	9 	9 	9 
Packing group	III	III	III	III	III
Environmental hazards	Yes.	Yes.	Yes.	Yes.	Yes.

Additional information

DOT Classification

- Non-bulk packages of this product are not regulated as hazardous materials unless transported by inland waterway. This product is not regulated as a hazardous material when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of §§ 173.24 and 173.24a.

Limited quantity Yes.

Packaging instruction Exceptions: 155. Non-bulk: 203. Bulk: 241.

Special provisions 8, 146, 173, 335, 441, IB3, T4, TP1, TP29

TDG Classification

- Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.43-2.45 (Class 9), 2.7 (Marine pollutant mark). Non-bulk packages of this product are not regulated as dangerous goods when transported by road or rail.

Explosive Limit and Limited Quantity Index 5

Special provisions 16, 99

Mexico Classification

- This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

Special provisions 274, 331, 335, 375

IMDG

- This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

Emergency schedules F-A, S-F

Special provisions 274, 335, 375, 969

IATA

- This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

Quantity limitation Passenger and Cargo Aircraft: 450 L. Packaging instructions: 964. Cargo Aircraft Only: 450 L. Packaging instructions: 964. Limited Quantities - Passenger Aircraft: 30 kg. Packaging instructions: Y964.

Special provisions A97, A158, A197, A215

- 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 in bulk according to IMO instruments** : Not available.

Section 15. Regulatory information

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

U.S. Federal regulations

TSCA 12(b) - Chemical export notification

Not applicable.

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 : SKIN IRRITATION - Category 2
EYE IRRITATION - Category 2A
SKIN SENSITIZATION - Category 1
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
HNOC - Exothermic polymerization

Composition/information on ingredients

Name	%	Classification
Reaction product: bisphenol-A-(epichlorohydrin); epoxy resin	≥30 - ≤60	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
Phenol, polymer with formaldehyde, glycidyl ether	≥10 - ≤30	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
2,2'-[methylenebis(p-phenyleneoxymethylene)] bisoxirane	≥0.1 - ≤1	SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

State regulations

Massachusetts : The following components are listed: TITANIUM DIOXIDE

New York : None of the components are listed.

New Jersey : The following components are listed: TITANIUM DIOXIDE

Pennsylvania : The following components are listed: TITANIUM OXIDE

California Prop. 65

 **WARNING:** This product can expose you to Titanium dioxide, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Section 15. Regulatory information

Ingredient name	No significant risk level	Maximum acceptable dosage level
Titanium dioxide	Yes	-

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia	: Not determined.
Canada	: Not determined.
China	: Not determined.
Japan	: Japan inventory (CSCL): Not determined. Japan inventory (ISHL): Not determined.
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: Not determined.
Thailand	: Not determined.
Turkey	: Not determined.
United States	: Not determined.
Viet Nam	: Not determined.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 AQUATIC HAZARD (LONG-TERM) - Category 2	Calculation method Calculation method Calculation method Calculation method Calculation method

History

Date of issue/Date of revision	: 07/22/2026
Date of previous issue	: 05/29/2026
Version	: 2.1

Section 16. Other information

Key to abbreviations

: ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
DOT = Department of Transportation
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
IMO = International Maritime Organization
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973
as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
SGG = Segregation Group
TDG = Transportation of Dangerous Goods
UN = United Nations

Indicates information that has changed from previously issued version.

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.

SAFETY DATA SHEET

Agilent Torr Seal - part B - Hardener

Section 1. Identification

GHS product identifier : Agilent Torr Seal - part B - Hardener

Part no. : Not available.

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

Identified uses : Analytical chemistry.
Sealants and adhesives
Tube
27.88 ml - 46 gr

Supplier/Manufacturer : Agilent Technologies, Inc.
5301 Stevens Creek Blvd
Santa Clara, CA 95051, USA
800-227-9770

Emergency telephone number (with hours of operation) : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

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

Classification of the substance or mixture

H330 ACUTE TOXICITY (inhalation) - Category 2
H314 SKIN CORROSION - Category 1B
H318 SERIOUS EYE DAMAGE - Category 1
H317 SKIN SENSITIZATION - Category 1
H350 CARCINOGENICITY - Category 1A
H360 TOXIC TO REPRODUCTION - Category 1B
H335 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
H411 AQUATIC HAZARD (LONG-TERM) - Category 2

Ingredients of unknown toxicity : Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30%
Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 19.8%

GHS label elements

Hazard pictograms :



Signal word : Danger

Section 2. Hazards identification

Hazard statements	: H314 - Causes severe skin burns and eye damage. H317 - May cause an allergic skin reaction. H330 - Fatal if inhaled. H335 - May cause respiratory irritation. H350 - May cause cancer. H360 - May damage fertility or the unborn child. H411 - Toxic to aquatic life with long lasting effects. Corrosive to the respiratory tract.
Precautionary statements	
Prevention	: P201 - Obtain special instructions before use. P280 - Wear protective gloves, protective clothing and eye or face protection. P284 - In case of inadequate ventilation wear respiratory protection. P273 - Avoid release to the environment. P260 - Do not breathe vapor.
Response	: P391 - Collect spillage. P308 + P313 - IF exposed or concerned: Get medical advice or attention. P304 + P340, P310 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor. P301 + P310, P330, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353, P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor. P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention. P363 - Wash contaminated clothing before reuse. 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 doctor.
Storage	: P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
Disposal	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Supplemental label elements	: Do not handle until all safety precautions have been read and understood. Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not breathe vapor or spray. Do not taste or swallow. Use only with adequate ventilation. Wash thoroughly after handling.
Other hazards	
Hazards not otherwise classified	: Polymerization is exothermic and can degenerate into an uncontrolled reaction. Causes digestive tract burns.
Hazards identified when used	: No known significant effects or critical hazards.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	Synonyms	%	Identifiers
2,2'-Iminodiethylamine	-	≥10 - ≤30	CAS: 111-40-0
crystalline silica, respirable powder	-	≥10 - ≤30	CAS: 14808-60-7
Bisphenol A	-	≥1 - ≤5	CAS: 80-05-7
2-piperazin-1-ylethylamine	2-(Piperazin-1-yl)ethan-1-amine	≥0.1 - ≤1	CAS: 140-31-8
2-(3,4-epoxycyclohexyl) ethyltrimethoxysilane	Trimethoxy[2-(7-oxabicyclo[4.1.0] heptan-3-yl)ethyl]silane	≥0.1 - ≤1	CAS: 3388-04-3

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 and hence require reporting in this section.

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

Section 4. First aid measures

Description of necessary first aid measures

- | | |
|---------------------|---|
| Eye contact | : 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 | : 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 | : 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 | : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. 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. |

Most important symptoms/effects, acute and delayed

Potential acute health effects

- | | |
|---------------------|---|
| Eye contact | : Causes serious eye damage. |
| Inhalation | : Fatal if inhaled. Corrosive to the respiratory tract. Causes burns. |
| Skin contact | : Causes severe burns. May cause an allergic skin reaction. |
| Ingestion | : May cause burns to mouth, throat and stomach. Corrosive to the digestive tract. Causes burns. |

Over-exposure signs/symptoms

- | | |
|--------------------|---|
| Eye contact | : Adverse symptoms may include the following:
pain
watering
redness |
| Inhalation | : Adverse symptoms may include the following:
respiratory tract irritation
coughing
reduced fetal weight
increase in fetal deaths
skeletal malformations |

Section 4. First aid measures

- Skin contact** : Adverse symptoms may include the following:
 pain or irritation
 redness
 blistering may occur
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
 stomach pains
 reduced fetal weight
 increase in fetal deaths
 skeletal malformations

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

- Notes to physician** : 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** : No specific treatment.
- Protection of first-aiders** : 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

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

- Specific hazards arising from the chemical** : Polymerization is exothermic and can degenerate into an uncontrolled reaction. 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.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
 carbon dioxide
 carbon monoxide
 nitrogen oxides
 metal oxide/oxides

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor. Put on appropriate personal protective equipment. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate.
- For emergency responders** : If specialized 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".

- Environmental precautions** : 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). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Methods and materials for containment and cleaning up

- Methods for cleaning up** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. 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

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. 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. Avoid release to the environment. 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. Store and use away from heat, sparks, open flame or any other ignition source. 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.

- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a cool, well-ventilated area away from incompatible materials and ignition sources. 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. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

[Control parameters](#)

[Occupational exposure limits](#)

Ingredient name	Exposure limits
2,2'-Iminodiethylamine	NIOSH REL (United States, 10/2020) Absorbed through skin. TWA 10 hours: 1 ppm. TWA 10 hours: 4 mg/m ³ . CAL OSHA PEL (United States, 1/2025) Absorbed through skin. TWA 8 hours: 4 mg/m ³ . TWA 8 hours: 1 ppm. OSHA PEL 1989 (United States, 3/1989) TWA 8 hours: 1 ppm. TWA 8 hours: 4 mg/m ³ . ACGIH TLV (United States, 1/2025) Absorbed through skin. TWA 8 hours: 1 ppm. TWA 8 hours: 4.2 mg/m ³ .
crystalline silica, respirable powder	NIOSH REL (United States, 10/2020) [SILICA, CRYSTALLINE] NIA. TWA 10 hours: 0.05 mg/m ³ . Form: respirable dust. CAL OSHA PEL (United States, 1/2025) TWA 8 hours: 0.05 mg/m ³ . OSHA PEL Z3 (United States, 6/2016) TWA 8 hours: 250 / (%SiO ₂ +5) mppcf. Form: Respirable. TWA 8 hours: 10 / (%SiO ₂ +2) mg/m ³ . Form: Respirable. OSHA PEL (United States, 5/2018) [Silica, crystalline] TWA 8 hours: 50 µg/m ³ . Form: Respirable dust. OSHA PEL 1989 (United States, 3/1989) TWA 8 hours: 0.1 mg/m ³ (as quartz). Form: Respirable dust. ACGIH TLV (United States, 1/2025) [Silica, crystalline] A2. TWA 8 hours: 0.025 mg/m ³ . Form: Respirable fraction.
Bisphenol A	None.
2-piperazin-1-ylethylamine	None.
2-(3,4-epoxycyclohexyl)ethyltrimethoxysilane	None.

[Biological exposure indices](#)

No exposure indices known.

[Appropriate engineering controls](#)

- : Use only with adequate ventilation. Engineering controls may be required to control the primary or secondary risks associated with this product. 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.

Section 8. Exposure controls/personal protection

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**
- Hand protection** : When used as intended with Agilent instruments, use of the product is not expected to result in direct contact with the chemical. However, in case of accidental contact with splash wear good quality:
- Glove material: Nitrile rubber
Glove thickness: > 0.4 mm
Breakthrough time: > 480 minutes
- Selection of a suitable glove depends not only on the material but also on other quality properties, which may vary from manufacturer to manufacturer. Consult your glove manufacturer for the exact breakthrough times and comply.
- 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** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

- Physical state** : Liquid.
- Color** : Green.
- Odor** : Ammoniacal.
- Odor threshold** : Not available.
- pH** : >7
- Melting point/freezing point** : Not available.
- Boiling point or initial boiling point and boiling range** : >100°C (>212°F)
- Flash point** : Closed cup: >100°C (>212°F)
- Evaporation rate** : Not available.
- Flammability** : Not applicable.
- Lower and upper explosion limit/flammability limit** : Not available.

Section 9. Physical and chemical properties

Vapor pressure	:	Vapor Pressure at 20°C			Vapor pressure at 50°C			
		Ingredient name	mm Hg	kPa	Method	mm Hg	kPa	Method
		2,2'-Iminodiethylamine	0.16	0.021	-	-	-	-
		Bisphenol A	0	0	OECD 104	0	0	OECD 104
Relative vapor density	:	Not available.						
Relative density	:	1.65						
Solubility(ies)	:	Media			Result			
		water			Insoluble			
Miscible with water	:	No.						
Partition coefficient: n-octanol/water	:	Not applicable.						
Auto-ignition temperature	:	Ingredient name		°C	°F	Method		
		2,2'-Iminodiethylamine		358	676.4	-		
		Bisphenol A		510	950	-		
Decomposition temperature	:	Not available.						
Viscosity	:	Dynamic (room temperature): Not available.						
		Kinematic (room temperature): Not available.						
		Kinematic (40°C (104°F)): Not available.						
Particle characteristics								
Median particle size	:	Not applicable.						

Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.						
Chemical stability	:	The product may not be stable under certain conditions of storage or use. See "Possibility of Hazardous Reactions" for further information.						
Possibility of hazardous reactions	:	Free radical initiators, peroxides, strongly alkaline and strongly acidic materials or reactive metals. Contact with these could result in uncontrolled exothermic polymerization. Hazardous reactions or instability may occur under certain conditions of storage or use.						
Conditions to avoid	:	No specific data.						
Incompatible materials	:	May react or be incompatible with oxidizing materials. acids alkalis halogenated hydrocarbons 2,2'-iminodi(ethylamine) copper alloys nickel alloys nitrosating agents Reactive or incompatible with the following materials: metals and acids.						
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.						

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	
2,2'-Iminodiethylamine	Rat - Oral - LD50	1080 mg/kg
	Rabbit - Dermal - LD50	1090 mg/kg
Bisphenol A	Rat - Oral - LD50	1200 mg/kg
	Rabbit - Dermal - LD50	3600 mg/kg
2-(3,4-epoxycyclohexyl) ethyltrimethoxysilane	Rabbit - Male, Female - Dermal - LD50	6741 mg/kg
	Rat - Male, Female - Oral - LD50	13161 mg/kg

Conclusion/Summary [Product] : Not available.

Skin corrosion/irritation

Product/ingredient name	Result	
2,2'-Iminodiethylamine	Rabbit - Skin - Moderate irritant	-
Bisphenol A	Rabbit - Skin - Mild irritant	Duration of treatment/ exposure: 24 hours
	Rabbit - Skin - Mild irritant	-
2-piperazin-1-ylethylamine	Rabbit - Skin - Severe irritant	Duration of treatment/ exposure: 24 hours
2-(3,4-epoxycyclohexyl) ethyltrimethoxysilane	Rabbit - Skin - Mild irritant	-

Conclusion/Summary [Product] : Not available.

Serious eye damage/eye irritation

	Result	
Bisphenol A	Rabbit - Eyes - Severe irritant	Duration of treatment/ exposure: 24 hours
2-piperazin-1-ylethylamine	Rabbit - Eyes - Moderate irritant	Duration of treatment/ exposure: 24 hours

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Product/ingredient name

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Ingredient name

Conclusion/Summary

2,2'-Iminodiethylamine

May cause sensitization by inhalation.

Section 11. Toxicological information

Germ cell mutagenicity

Conclusion/Summary : Not available.
[Product]

Carcinogenicity

Not available.

Conclusion/Summary : Not available.
[Product]

Classification

Product/ingredient name	OSHA	IARC	NTP
crystalline silica, respirable powder	+	1	Known to be a human carcinogen.

Reproductive toxicity

Conclusion/Summary : Not available.
[Product]

Specific target organ toxicity (single exposure)

Product/ingredient name **Result**

2,2'-Iminodiethylamine SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
 Bisphenol A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3

Specific target organ toxicity (repeated exposure)

Product/ingredient name **Result**

2-piperazin-1-ylethylamine SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (respiratory tract) (inhalation) - Category 1

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact : Causes serious eye damage.
Inhalation : Fatal if inhaled. Corrosive to the respiratory tract. Causes burns.
Skin contact : Causes severe burns. May cause an allergic skin reaction.
Ingestion : May cause burns to mouth, throat and stomach. Corrosive to the digestive tract. Causes burns.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
 pain
 watering
 redness

Section 11. Toxicological information

- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : 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

- Conclusion/Summary [Product]** : Not available.

- General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- Carcinogenicity** : May cause cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : May damage fertility or the unborn child.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Agilent Torr Seal - part B - Hardener	3932.2	4254.0	N/A	2.0	N/A
2,2'-Iminodiethylamine	1080	1090	N/A	0.5	N/A
Bisphenol A	1200	3600	N/A	N/A	N/A
2-piperazin-1-ylethylamine	500	868	N/A	N/A	N/A
2-(3,4-epoxycyclohexyl)ethyltrimethoxysilane	13161	6741	N/A	N/A	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	
2,2'-Iminodiethylamine	Acute - LC50 - Fresh water	53.5 mg/l [48 hours]
	Acute - LC50 - Fresh water	1014 mg/l [96 hours]
	Acute - EC50 - Fresh water	345.6 mg/l [96 hours]
Bisphenol A	Acute - EC50 - Marine water	1000 µg/l [96 hours]
	Chronic - NOEC - Fresh water	0.2 µg/l [90 days]
	Acute - LC50 - Marine water	3.5 mg/l [96 hours]
	Chronic - NOEC - Marine water	10 µg/l [21 days]
	Acute - LC50 - Marine water	50.4 µg/l [48 hours]
	Chronic - NOEC - Marine water	20.1 µg/l [4 days]
2-piperazin-1-ylethylamine	Acute - LC50 - Fresh water	2190 mg/l [96 hours]

Conclusion/Summary [Product] : Not available.

Persistence and degradability

Product/ingredient name	Result		
Bisphenol A	OECD [Ready Biodegradability - Manometric Respirometry Test]	74.7 to 81.4% [28 days] - Readily	
2-piperazin-1-ylethylamine	OECD [Ready Biodegradability - Manometric Respirometry Test]	0% [28 days] - Not readily	Aerobic

Conclusion/Summary [Product] : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
2,2'-Iminodiethylamine	2 to 4 days [Marine water] [pH 8] [20 °C]	-	Readily
Bisphenol A	-	-	Readily
2-piperazin-1-ylethylamine	-	-	Not readily
2-(3,4-epoxycyclohexyl) ethyltrimethoxysilane	-	-	Not readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
2,2'-Iminodiethylamine	-5.58	2.8 to 6.3 [OECD 305 C]	Low
Bisphenol A	3.4	20 to 67	Low
2-piperazin-1-ylethylamine	-1.48	-	Low

Mobility in soil

Soil/Water partition coefficient : Not available.

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

Section 13. Disposal considerations

- 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.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	UN2735	UN2735	UN2735	UN2735	UN2735
UN proper shipping name	Amines, liquid, corrosive, n.o.s. (2,2'-Iminodiethylamine)	AMINES, LIQUID, CORROSIVE, N. O.S. (2,2'-Iminodiethylamine)	AMINAS LÍQUIDAS, CORROSIVAS, N. E.P. (2,2'-Iminodiethylamine)	AMINES, LIQUID, CORROSIVE, N.O. S. (2,2'-Iminodiethylamine)	Amines, liquid, corrosive, n.o.s. (2,2'-Iminodiethylamine)
Transport hazard class(es)	8 	8  	8 	8  	8 
Packing group	II	II	II	II	II
Environmental hazards	No.	Yes.	Yes. The environmentally hazardous substance mark is not required.	Yes.	Yes. The environmentally hazardous substance mark is not required.

Additional information

DOT Classification

- : **Limited quantity** Yes.
Packaging instruction Exceptions: 154. Non-bulk: 202. Bulk: 242.
Quantity limitation Passenger aircraft/rail: 1 L. Cargo aircraft: 30 L.
Special provisions B2, IB2, T11, TP1, TP27

TDG Classification

- : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.40-2.42 (Class 8), 2.7 (Marine pollutant mark). The marine pollutant mark is not required when transported by road or rail.
Explosive Limit and Limited Quantity Index 1
Passenger Carrying Road or Rail Index 1
Special provisions 16

Mexico Classification

- : **Special provisions** 274

IMDG

- : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Emergency schedules F-A, S-B
Special provisions 274

Section 14. Transport information

IATA : The environmentally hazardous substance mark may appear if required by other transportation regulations.
Quantity limitation Passenger and Cargo Aircraft: 1 L. Packaging instructions: 851. Cargo Aircraft Only: 30 L. Packaging instructions: 855. Limited Quantities - Passenger Aircraft: 0.5 L. Packaging instructions: Y840.
Special provisions A3, A803

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 in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

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

U.S. Federal regulations : **TSCA 8(d) H and S data reporting:** Bisphenol A

TSCA 12(b) - Chemical export notification

Not applicable.

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 : ACUTE TOXICITY (inhalation) - Category 2
 SKIN CORROSION - Category 1B
 SERIOUS EYE DAMAGE - Category 1
 SKIN SENSITIZATION - Category 1
 CARCINOGENICITY - Category 1A
 TOXIC TO REPRODUCTION - Category 1B
 SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
 HNOC - Exothermic polymerization
 HNOC - Corrosive to digestive tract

Composition/information on ingredients

Section 15. Regulatory information

Name	%	Classification
2,2'-Iminodiethylamine	≥10 - ≤30	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 2 SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3 HNOC - Corrosive to digestive tract CARCINOGENICITY - Category 1A
crystalline silica, respirable powder	≥10 - ≤30	
Bisphenol A	≥1 - ≤5	ACUTE TOXICITY (oral) - Category 4 SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1 TOXIC TO REPRODUCTION - Category 1B SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
2-piperazin-1-ylethylamine	≥0.1 - ≤1	FLAMMABLE LIQUIDS - Category 4 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 3 SKIN CORROSION - Category 1B SERIOUS EYE DAMAGE - Category 1 SKIN SENSITIZATION - Category 1 TOXIC TO REPRODUCTION - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1 HNOC - Corrosive to digestive tract
2-(3,4-epoxycyclohexyl) ethyltrimethoxysilane	≥0.1 - ≤1	SKIN SENSITIZATION - Category 1B GERM CELL MUTAGENICITY - Category 2 CARCINOGENICITY - Category 2

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Bisphenol A	80-05-7	≥1 - ≤5
Supplier notification	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: DIETHYLENE TRIAMINE; SILICA, CRYSTALLINE, QUARTZ; 4,4'-ISOPROPYLIDENEDIPHENOL
- New York** : None of the components are listed.
- New Jersey** : The following components are listed: DIETHYLENE TRIAMINE; SILICA, QUARTZ; BISPHENOL A
- Pennsylvania** : The following components are listed: 1,2-ETHANEDIAMINE, N-(2-AMINOETHYL)-; QUARTZ DUST; 4,4'-ISOPROPYLIDENEDIPHENOL

California Prop. 65

 **WARNING:** This product can expose you to chemicals including Silica, crystalline, which is known to the State of California to cause cancer, and Bisphenol A, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
 Silica, crystalline	-	-
Bisphenol A	-	Yes

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Section 15. Regulatory information

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia	: Not determined.
Canada	: Not determined.
China	: Not determined.
Japan	: Japan inventory (CSCL) : Not determined. Japan inventory (ISHL) : Not determined.
New Zealand	: Not determined.
Philippines	: Not determined.
Republic of Korea	: Not determined.
Taiwan	: Not determined.
Thailand	: Not determined.
Turkey	: Not determined.
United States	: Not determined.
Viet Nam	: Not determined.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
ACUTE TOXICITY (inhalation) - Category 2	Calculation method
SKIN CORROSION - Category 1B	Calculation method
SERIOUS EYE DAMAGE - Category 1	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
CARCINOGENICITY - Category 1A	Calculation method
TOXIC TO REPRODUCTION - Category 1B	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 2	Calculation method

History

Date of issue/Date of revision	: 05/29/2026
Date of previous issue	: 04/29/2026
Version	: 2
Key to abbreviations	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor DOT = Department of Transportation GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods IMO = International Maritime Organization

Section 16. Other information

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

N/A = Not available

SGG = Segregation Group

TDG = Transportation of Dangerous Goods

UN = United Nations

🔹 Indicates information that has changed from previously issued version.

[Notice to reader](#)

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