

SAFETY DATA SHEET

Torr Seal, Part Number 9530001

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

1.1 Product identifier

Product name	: Torr Seal, Part Number 9530001	
Part no. (chemical kit)	: 9530001	
Part no.	: Agilent Torr Seal - part A - Epoxy Resin	Not available.
	: Agilent Torr Seal - part B - Hardener	Not available.

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

Identified uses	: Analytical chemistry. Sealants and adhesives	
	: Agilent Torr Seal - part A - Epoxy Resin	Tube 69.5 ml - 95 gr
	: Agilent Torr Seal - part B - Hardener	Tube 27.88 ml - 46 gr
Uses advised against	: None known.	

1.3 Details of the supplier of the safety data sheet

Agilent Technologies LDA UK Ltd.
5500 Lakeside Cheadle Royal Business Park,
Cheadle, Cheshire, SK8 3GR
United Kingdom
Tel: +44 (0) 345 712 5292
e-mail address of person responsible for this SDS : pdl-msds_author@agilent.com

1.4 Emergency telephone number

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

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Agilent Torr Seal - part A Mixture
- Epoxy Resin
Agilent Torr Seal - part B Mixture
- Hardener

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

Agilent Torr Seal - part A - Epoxy Resin

H315	SKIN CORROSION/IRRITATION	Category 2
H319	SERIOUS EYE DAMAGE/EYE IRRITATION	Category 2
H317	SKIN SENSITISATION	Category 1
H411	LONG-TERM (CHRONIC) AQUATIC HAZARD	Category 2

Agilent Torr Seal - part B - Hardener

H314	SKIN CORROSION/IRRITATION	Category 1B
H317	SKIN SENSITISATION	Category 1
H360F	REPRODUCTIVE TOXICITY	Category 1B
H411	LONG-TERM (CHRONIC) AQUATIC HAZARD	Category 2

SECTION 2: Hazards identification

Agilent Torr Seal - part A - Epoxy Resin	The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.
Agilent Torr Seal - part B - Hardener	The product is classified as hazardous according to UK CLP Regulation SI 2019/720 as amended.

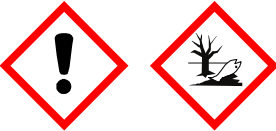

Ingredients of unknown toxicity	: Agilent Torr Seal - part A - Epoxy Resin	Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 10 - 30% Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 10 - 30% Percentage of the mixture consisting of ingredient(s) of unknown acute oral toxicity: 10 - 30%
	Agilent Torr Seal - part B - Hardener	Percentage of the mixture consisting of ingredient(s) of unknown acute dermal toxicity: 10 - 30% 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 acute oral toxicity: 10 - 30%

Ingredients of unknown ecotoxicity	: Agilent Torr Seal - part B - Hardener	Contains 19.8% of components with unknown hazards to the aquatic environment
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See Section 16 for the full text of the H statements declared above.

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

2.2 Label elements

Hazard pictograms	: Agilent Torr Seal - part A - Epoxy Resin	
	Agilent Torr Seal - part B - Hardener	

Signal word	: Agilent Torr Seal - part A - Epoxy Resin	Warning
	Agilent Torr Seal - part B - Hardener	Danger

Hazard statements	: Agilent Torr Seal - part A - Epoxy Resin	H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H319 - Causes serious eye irritation. H411 - Toxic to aquatic life with long lasting effects.
	Agilent Torr Seal - part B - Hardener	H314 - Causes severe skin burns and eye damage. H317 - May cause an allergic skin reaction. H360F - May damage fertility. H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention	: Agilent Torr Seal - part A - Epoxy Resin	P280 - Wear protective gloves. Wear eye or face protection. P273 - Avoid release to the environment. P261 - Avoid breathing vapour. P264 - Wash thoroughly after handling.
	Agilent Torr Seal - part B - Hardener	P201 - Obtain special instructions before use. P280 - Wear protective gloves, protective clothing and eye or face protection. P273 - Avoid release to the environment.

SECTION 2: Hazards identification

Response	: Agilent Torr Seal - part A - Epoxy Resin Agilent Torr Seal - part B - Hardener	P391 - Collect spillage. P391 - Collect spillage. P308 + P313 - IF exposed or concerned: Get medical advice or attention.				
Storage	: Agilent Torr Seal - part A - Epoxy Resin Agilent Torr Seal - part B - Hardener	Not applicable. Not applicable.				
Disposal	: Agilent Torr Seal - part A - Epoxy Resin Agilent Torr Seal - part B - Hardener	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations. P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.				
Hazardous ingredients	: Agilent Torr Seal - part A - Epoxy Resin Agilent Torr Seal - part B - Hardener	reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700); Phenol, polymer with formaldehyde, glycidyl ether and 2,2'-[methylenebis(p-phenyleneoxymethylene)]bisoxirane 2,2'-iminodiethylamine; 4,4'-isopropylidenediphenol; 2-piperazin-1-ylethylamine and 2-(3,4-epoxycyclohexyl)ethyltrimethoxysilane				
Supplemental label elements	: Agilent Torr Seal - part A - Epoxy Resin Agilent Torr Seal - part B - Hardener	Contains epoxy constituents. May produce an allergic reaction. Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist. Not applicable.				
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	: Agilent Torr Seal - part A - Epoxy Resin Agilent Torr Seal - part B - Hardener	Not applicable. Restricted to professional users.				
Special packaging requirements						
Containers to be fitted with child-resistant fastenings	: Agilent Torr Seal - part A - Epoxy Resin Agilent Torr Seal - part B - Hardener	Not applicable. Not applicable.				
Tactile warning of danger	: Agilent Torr Seal - part A - Epoxy Resin Agilent Torr Seal - part B - Hardener	Not applicable. Not applicable.				
2.3 Other hazards						
Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII	: Agilent Torr Seal - part A - Epoxy Resin Agilent Torr Seal - part B - Hardener	This mixture does not contain any substances that are assessed to be a PBT or a vPvB. This mixture does not contain any substances that are assessed to be a PBT or a vPvB.				
Other hazards which do not result in classification	: Agilent Torr Seal - part A - Epoxy Resin Agilent Torr Seal - part B - Hardener	Polymerization is exothermic and can degenerate into an uncontrolled reaction. Polymerization is exothermic and can degenerate into an uncontrolled reaction. Causes digestive tract burns.				
Substances identified as having endocrine disruptor properties	: <table border="1"> <thead> <tr> <th>Ingredient name</th> <th>Impact</th> </tr> </thead> <tbody> <tr> <td>Agilent Torr Seal - part B - Hardener 4,4'-isopropylidenediphenol</td> <td>Human health and environment.</td> </tr> </tbody> </table>	Ingredient name	Impact	Agilent Torr Seal - part B - Hardener 4,4'-isopropylidenediphenol	Human health and environment.	
Ingredient name	Impact					
Agilent Torr Seal - part B - Hardener 4,4'-isopropylidenediphenol	Human health and environment.					

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SECTION 3: Composition/information on ingredients

3.1 Substances : Agilent Torr Seal - part A - Epoxy Resin Mixture
 Agilent Torr Seal - part B - Hardener Mixture

Product/ingredient name	Identifiers	%	Classification	Type
Agilent Torr Seal - part A - Epoxy Resin reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)	EC: 500-033-5 CAS: 25068-38-6 Index: 603-074-00-8	≥25 - ≤50	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	[1]
Phenol, polymer with formaldehyde, glycidyl ether	CAS: 28064-14-4	≥10 - ≤25	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	[1]
titanium dioxide	EC: 236-675-5 CAS: 13463-67-7 Index: 022-006-00-2	≤10	Carc. 2, H351 (inhalation)	[1] [2] [*]
2,2'-[methylenebis(p-phenyleneoxymethylene)] bisoxirane	EC: 218-257-4 CAS: 2095-03-6	<1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	[1]
Agilent Torr Seal - part B - Hardener 2,2'-iminodiethylamine	EC: 203-865-4 CAS: 111-40-0 Index: 612-058-00-X	≥10 - ≤25	Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1B, H314 Skin Sens. 1, H317	[1] [2]
Quartz (SiO2)	EC: 238-878-4 CAS: 14808-60-7	≥10 - ≤25	STOT RE 1, H372 (lungs) (inhalation)	[1] [2]
4,4'-isopropylidenediphenol	EC: 201-245-8 CAS: 80-05-7 Index: 604-030-00-0	<2.5	Eye Dam. 1, H318 Skin Sens. 1, H317 Repr. 1B, H360F STOT SE 3, H335 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=10)	[1] [2] [3]
2-piperazin-1-ylethylamine	EC: 205-411-0 CAS: 140-31-8 Index: 612-105-00-4	<1	Acute Tox. 4, H302 Acute Tox. 3, H311 Skin Corr. 1B, H314 Skin Sens. 1, H317 Repr. 2, H361fd STOT RE 1, H372 Aquatic Chronic 3, H412	[1]
2-(3,4-epoxycyclohexyl) ethyltrimethoxysilane	EC: 222-217-1 CAS: 3388-04-3	<1	Skin Sens. 1B, H317 Muta. 2, H341 Carc. 2, H351 Aquatic Chronic 3, H412	[1]
			See Section 16 for the full text of the H statements declared above.	

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SECTION 3: Composition/information on ingredients

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

Type

Agilent Torr Seal - part A - Epoxy Resin	[1] Substance classified with a health or environmental hazard [2] Substance with a workplace exposure limit [*] The classification as a carcinogen by inhalation applies only to mixtures placed on the market in powder form containing 1% or more of titanium dioxide particles with aerodynamic diameter $\leq 10 \mu\text{m}$ not bound within a matrix.
Agilent Torr Seal - part B - Hardener	[1] Substance classified with a health or environmental hazard [2] Substance with a workplace exposure limit [3] Substance of equivalent concern

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

SECTION 4: First aid measures

4.1 Description of first aid measures

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

SECTION 4: First aid measures

Ingestion

: Agilent Torr Seal - part A
- Epoxy Resin

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.

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.

Agilent Torr Seal - part B
- Hardener

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.

Protection of first-aiders

: Agilent Torr Seal - part A
- Epoxy Resin

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

Agilent Torr Seal - part B
- Hardener

No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

Eye contact

: Agilent Torr Seal - part A
- Epoxy Resin

Adverse symptoms may include the following:
pain or irritation
watering
redness

Agilent Torr Seal - part B
- Hardener

Adverse symptoms may include the following:
pain
watering
redness

Inhalation

: Agilent Torr Seal - part A
- Epoxy Resin

No specific data.

Agilent Torr Seal - part B
- Hardener

Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

SECTION 4: First aid measures

Skin contact	: Agilent Torr Seal - part A - Epoxy Resin	Adverse symptoms may include the following: irritation redness
	Agilent Torr Seal - part B - Hardener	Adverse symptoms may include the following: pain or irritation redness blistering may occur reduced foetal weight increase in foetal deaths skeletal malformations
Ingestion	: Agilent Torr Seal - part A - Epoxy Resin	No specific data.
	Agilent Torr Seal - part B - Hardener	Adverse symptoms may include the following: stomach pains reduced foetal weight increase in foetal deaths skeletal malformations

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	: Agilent Torr Seal - part A - Epoxy Resin	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
	Agilent Torr Seal - 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	: Agilent Torr Seal - part A - Epoxy Resin	No specific treatment.
	Agilent Torr Seal - part B - Hardener	No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	: Agilent Torr Seal - part A - Epoxy Resin	Use an extinguishing agent suitable for the surrounding fire.
	Agilent Torr Seal - part B - Hardener	Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media	: Agilent Torr Seal - part A - Epoxy Resin	None known.
	Agilent Torr Seal - part B - Hardener	None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	: Agilent Torr Seal - part A - Epoxy Resin	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.
	Agilent Torr Seal - part B - Hardener	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.

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SECTION 5: Firefighting measures

Hazardous combustion products	: Agilent Torr Seal - part A - Epoxy Resin	Decomposition products may include the following materials: carbon dioxide carbon monoxide halogenated compounds metal oxide/oxides
	: Agilent Torr Seal - part B - Hardener	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides metal oxide/oxides

5.3 Advice for firefighters

Special protective actions for fire-fighters	: Agilent Torr Seal - part A - Epoxy 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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
	: Agilent Torr Seal - 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. 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	: Agilent Torr Seal - part A - Epoxy Resin	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
	: Agilent Torr Seal - 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	: Agilent Torr Seal - part A - Epoxy Resin	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
	: Agilent Torr Seal - part B - Hardener	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	: Agilent Torr Seal - part A - Epoxy Resin	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
	: Agilent Torr Seal - part B - Hardener	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

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SECTION 6: Accidental release measures

6.2 Environmental precautions	: Agilent Torr Seal - part A - Epoxy Resin	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.
	Agilent Torr Seal - part B - Hardener	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up	: Agilent Torr Seal - part A - Epoxy Resin	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.
	Agilent Torr Seal - part B - Hardener	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.

6.4 Reference to other sections	: See Section 1 for emergency contact information. See Section 8 for information on appropriate personal protective equipment. See Section 13 for additional waste treatment information.
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SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures	: Agilent Torr Seal - part A - Epoxy Resin	Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Avoid release to the environment. 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. 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.
	Agilent Torr Seal - part B - Hardener	Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. 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. 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.

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SECTION 7: Handling and storage

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

7.2 Conditions for safe storage, including any incompatibilities

Storage	: Agilent Torr Seal - part A - Epoxy Resin	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. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.
	Agilent Torr Seal - part B - Hardener	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 unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Seveso Directive - Reporting thresholds

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
Agilent Torr Seal - part A - Epoxy Resin E2	200 tonne	500 tonne
Agilent Torr Seal - part B - Hardener E2	200 tonne	500 tonne

7.3 Specific end use(s)

Recommendations	: Agilent Torr Seal - part A - Epoxy Resin	Industrial applications, Professional applications.
	Agilent Torr Seal - part B - Hardener	Industrial applications, Professional applications.
Industrial sector specific solutions	: Agilent Torr Seal - part A - Epoxy Resin	Not available.
	Agilent Torr Seal - part B - Hardener	Not available.

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
Agilent Torr Seal - part A - Epoxy Resin titanium dioxide	EH40/2005 WELs (United Kingdom (UK), 1/2020). TWA: 4 mg/m ³ 8 hours. Form: respirable TWA: 10 mg/m ³ 8 hours. Form: total inhalable
Agilent Torr Seal - part B - Hardener 2,2'-iminodiethylamine	EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin. TWA: 4.3 mg/m ³ 8 hours. TWA: 1 ppm 8 hours.
Quartz (SiO ₂)	EH40/2005 WELs (United Kingdom (UK), 1/2020). [silica, respirable crystalline] TWA: 0.1 mg/m ³ 8 hours. Form: Respirable fraction
4,4'-isopropylidenediphenol	EH40/2005 WELs (United Kingdom (UK), 1/2020). TWA: 2 mg/m ³ 8 hours.

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures

: Reference should be made to appropriate monitoring standards. Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
Agilent Torr Seal - part A - Epoxy Resin titanium dioxide	DNEL	Long term Inhalation	28 µg/m ³	General population	Local
	DNEL	Long term Inhalation	170 µg/m ³	Workers	Local
Agilent Torr Seal - part B - Hardener 2,2'-iminodiethylamine	DNEL	Long term Inhalation	0.87 mg/m ³	Workers	Local
	DNEL	Long term Dermal	1.1 mg/cm ²	Workers	Local
	DNEL	Short term Inhalation	2.6 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	4.6 mg/m ³	General population	Systemic
	DNEL	Short term Dermal	4.88 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	4.88 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	11.4 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	15.4 mg/m ³	Workers	Systemic
	DNEL	Short term Inhalation	27.5 mg/m ³	General population	Systemic
	DNEL	Short term Inhalation	92.1 mg/m ³	Workers	Systemic
4,4'-isopropylidenediphenol	DNEL	Short term Dermal	24 µg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	24 µg/kg bw/day	General population	Systemic
	DNEL	Short term Oral	53 µg/kg	General	Systemic

SECTION 8: Exposure controls/personal protection

2-piperazin-1-ylethylamine	DNEL	Long term Oral	bw/day 53 µg/kg	population General population	Systemic
	DNEL	Short term Dermal	bw/day 66 µg/kg	Workers	Systemic
	DNEL	Long term Dermal	bw/day 66 µg/kg	Workers	Systemic
	DNEL	Short term Inhalation	1 mg/m ³	General population	Local
	DNEL	Long term Inhalation	1 mg/m ³	General population	Local
	DNEL	Short term Inhalation	1 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	1 mg/m ³	General population	Systemic
	DNEL	Short term Inhalation	2 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	2 mg/m ³	Workers	Local
	DNEL	Short term Inhalation	2 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	2 mg/m ³	Workers	Systemic
	DNEL	Short term Dermal	20 mg/kg	Workers	Systemic
	DNEL	Short term Inhalation	21.4 mg/m ³	Workers	Systemic
	DNEL	Short term Dermal	0.04 mg/cm ²	Workers	Local
	DNEL	Long term Dermal	3.3 mg/kg	Workers	Systemic
	DNEL	Long term Inhalation	3.6 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	0.006 mg/cm ²	Workers	Local
	DNEL	Short term Dermal	10 mg/kg	General population [Human via the environment]	Systemic
	DNEL	Short term Inhalation	5.3 mg/m ³	General population [Human via the environment]	Systemic
	DNEL	Short term Oral	1.5 mg/kg	General population [Human via the environment]	Systemic
DNEL	Short term Oral	0.02 mg/cm ²	General population [Human via the environment]	Local	
DMEL	Long term Dermal	1.7 mg/kg	General population [Human via the environment]	Systemic	
DMEL	Long term Inhalation	0.9 mg/m ³	General population [Human via the environment]	Systemic	
DMEL	Long term Oral	0.3 mg/kg	General population [Human via the environment]	Systemic	
DMEL	Long term Dermal	0.003 mg/cm ²	General population [Human via the environment]	Local	

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SECTION 8: Exposure controls/personal protection

	DNEL	Long term Inhalation	15 µg/m³	environment] Workers	Local
	DNEL	Short term Inhalation	80 µg/m³	Workers	Local
	DNEL	Long term Dermal	3.33 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	10.6 mg/m³	Workers	Systemic
	DNEL	Long term Inhalation	10.6 mg/m³	Workers	Systemic

PNECs

Product/ingredient name	Compartment Detail	Value	Method Detail
Agilent Torr Seal - part B - Hardener 2,2'-iminodiethylamine	Fresh water	0.56 mg/l	-
	Marine water	0.056 mg/l	-
	Fresh water sediment	1072 mg/kg	-
	Marine water sediment	107.2 mg/kg	-
	Sewage Treatment Plant	6 mg/l	-
	Soil	7.97 mg/kg	-
4,4'-isopropylidenediphenol	Fresh water	0.018 mg/l	-
	Marine water	0.016 mg/l	-
	Sewage Treatment Plant	320 mg/l	-
	Fresh water sediment	2.2 mg/kg	-
	Marine water sediment	0.44 mg/kg	-
	Soil	3.7 mg/kg	-
2-piperazin-1-ylethylamine	Fresh water	0.058 mg/l	-
	Marine water	0.0058 mg/l	-
	Sewage Treatment Plant	250 mg/l	-
	Fresh water sediment	215 mg/kg	-
	Marine water sediment	21.5 mg/kg	-
	Soil	42.9 mg/kg	-

8.2 Exposure controls

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

Individual protection measures

- 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** : 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. Recommended: Filter type: A (EN 14387)
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

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

9.1 Information on basic physical and chemical properties

Appearance

- Physical state** : Agilent Torr Seal - part A Liquid.
- Epoxy Resin
Agilent Torr Seal - part B Liquid.
- Hardener
- Colour** : Agilent Torr Seal - part A Off-white.
- Epoxy Resin
Agilent Torr Seal - part B Green.
- Hardener
- Odour** : Agilent Torr Seal - part A Mild.
- Epoxy Resin
Agilent Torr Seal - part B Ammoniacal.
- Hardener
- Odour threshold** : Agilent Torr Seal - part A Not available.
- Epoxy Resin
Agilent Torr Seal - part B Not available.
- Hardener
- Melting point/freezing point** : Agilent Torr Seal - part A Not available.
- Epoxy Resin
Agilent Torr Seal - part B Not available.
- Hardener
- Initial boiling point and boiling range** : Agilent Torr Seal - part A >260°C
- Epoxy Resin
Agilent Torr Seal - part B >100°C
- Hardener
- Flammability** : Agilent Torr Seal - part A Not applicable.
- Epoxy Resin
Agilent Torr Seal - part B Not applicable.
- Hardener

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SECTION 9: Physical and chemical properties

Upper/lower flammability or explosive limits : Agilent Torr Seal - part A Not available.
 - Epoxy Resin

Agilent Torr Seal - part B Not available.
 - Hardener

Flash point : Agilent Torr Seal - part A Open cup: >200°C
 - Epoxy Resin
 Agilent Torr Seal - part B Closed cup: >100°C
 - Hardener

Auto-ignition temperature	Ingredient name	°C	Method
	Agilent Torr Seal - part B - Hardener		
	2,2'-iminodiethylamine	358	-
	4,4'-isopropylidenediphenol	510	-

Decomposition temperature : Agilent Torr Seal - part A Not available.
 - Epoxy Resin
 Agilent Torr Seal - part B Not available.
 - Hardener

pH : Agilent Torr Seal - part A Not available.
 - Epoxy Resin
 Agilent Torr Seal - part B >7
 - Hardener

Viscosity : Agilent Torr Seal - part A Not available.
 - Epoxy Resin
 Agilent Torr Seal - part B Not available.
 - Hardener

Solubility(ies)	Media	Result
	Agilent Torr Seal - part A - Epoxy Resin water	Insoluble
	Agilent Torr Seal - part B - Hardener water	Insoluble

Partition coefficient: n-octanol/water : Agilent Torr Seal - part A Not applicable.
 - Epoxy Resin
 Agilent Torr Seal - part B Not applicable.
 - Hardener

Vapour pressure	Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
		mm Hg	kPa	Method	mm Hg	kPa	Method
	Agilent Torr Seal - part A - Epoxy Resin reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)	<0	<0	EU A.4	-	-	-
	Agilent Torr Seal - part B - Hardener 2,2'-iminodiethylamine	0.16	0.021	-	-	-	-
	4,4'-isopropylidenediphenol	0	0	OECD 104	0	0	OECD 104

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SECTION 9: Physical and chemical properties

Evaporation rate	: Agilent Torr Seal - part A	Not available.
	- Epoxy Resin	
	Agilent Torr Seal - part B	Not available.
	- Hardener	
Relative density	: Agilent Torr Seal - part A	1.57
	- Epoxy Resin	
	Agilent Torr Seal - part B	1.65
	- Hardener	
Vapour density	: Agilent Torr Seal - part A	Not available.
	- Epoxy Resin	
	Agilent Torr Seal - part B	Not available.
	- Hardener	
Explosive properties	: Agilent Torr Seal - part A	Not available.
	- Epoxy Resin	
	Agilent Torr Seal - part B	Not available.
	- Hardener	
Oxidising properties	: Agilent Torr Seal - part A	Not available.
	- Epoxy Resin	
	Agilent Torr Seal - part B	Not available.
	- Hardener	

Particle characteristics

Median particle size	: Agilent Torr Seal - part A	Not applicable.
	- Epoxy Resin	
	Agilent Torr Seal - part B	Not applicable.
	- Hardener	

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	: Agilent Torr Seal - part A	No specific test data related to reactivity available for this product or its ingredients.
	- Epoxy Resin	
	Agilent Torr Seal - part B	No specific test data related to reactivity available for this product or its ingredients.
	- Hardener	
10.2 Chemical stability	: Agilent Torr Seal - part A	The product may not be stable under certain conditions of storage or use. See "Possibility of Hazardous Reactions" for further information.
	- Epoxy Resin	
	Agilent Torr Seal - part B	The product may not be stable under certain conditions of storage or use. See "Possibility of Hazardous Reactions" for further information.
	- Hardener	
10.3 Possibility of hazardous reactions	: Agilent Torr Seal - part A	Free radical initiators, peroxides, strongly alkaline and strongly acidic materials or reactive metals. Contact with these could result in uncontrolled exothermic polymerisation. Hazardous reactions or instability may occur under certain conditions of storage or use.
	- Epoxy Resin	
	Agilent Torr Seal - part B	Free radical initiators, peroxides, strongly alkaline and strongly acidic materials or reactive metals. Contact with these could result in uncontrolled exothermic polymerisation. Hazardous reactions or instability may occur under certain conditions of storage or use.
	- Hardener	
10.4 Conditions to avoid	: Agilent Torr Seal - part A	No specific data.
	- Epoxy Resin	
	Agilent Torr Seal - part B	No specific data.
	- Hardener	

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SECTION 10: Stability and reactivity

10.5 Incompatible materials : Agilent Torr Seal - part A May react or be incompatible with oxidising materials.
 - Epoxy Resin
 Agilent Torr Seal - part B May react or be incompatible with oxidising materials.
 - Hardener
 acids
 alkalis
 2,2'-iminodi(ethylamine)
 halogenated hydrocarbons
 copper alloys
 nickel alloys
 nitrosating agents

10.6 Hazardous decomposition products : Agilent Torr Seal - part A Under normal conditions of storage and use, hazardous decomposition products should not be produced.
 - Epoxy Resin
 Agilent Torr Seal - part B Under normal conditions of storage and use, hazardous decomposition products should not be produced.
 - Hardener

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Agilent Torr Seal - part B - Hardener				
2,2'-iminodiethylamine	LD50 Dermal	Rabbit	1090 mg/kg	-
	LD50 Oral	Rat	1080 mg/kg	-
4,4'-isopropylidenediphenol	LD50 Dermal	Rabbit	3600 mg/kg	-
	LD50 Oral	Rat	1200 mg/kg	-
2-piperazin-1-ylethylamine	LD50 Dermal	Rabbit - Male	866 mg/kg	-
2-(3,4-epoxycyclohexyl)ethyltrimethoxysilane	LD50 Dermal	Rabbit - Male, Female	6741 mg/kg	-
	LD50 Oral	Rat - Male, Female	13161 mg/kg	-

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Agilent Torr Seal - part B - Hardener					
Agilent Torr Seal - part B - Hardener	4374.5	4176.1	N/A	N/A	N/A
2,2'-iminodiethylamine	1080	1090	N/A	N/A	N/A
4,4'-isopropylidenediphenol	N/A	3600	N/A	N/A	N/A
2-piperazin-1-ylethylamine	500	866	N/A	N/A	N/A
2-(3,4-epoxycyclohexyl)ethyltrimethoxysilane	13161	6741	N/A	N/A	N/A

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Agilent Torr Seal - part A - Epoxy Resin					
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)	Eyes - Mild irritant	Rabbit	-	100 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 uL	-
	Skin - Severe irritant	Rabbit	-	24 hours 2 mg	-
Agilent Torr Seal - part B - Hardener					

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SECTION 11: Toxicological information

2,2'-iminodiethylamine	Skin - Moderate irritant	Rabbit	-	500 mg	-
4,4'-isopropylidenediphenol	Eyes - Severe irritant	Rabbit	-	24 hours 250 ug	-
	Skin - Mild irritant	Rabbit	-	250 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
2-piperazin-1-ylethylamine	Eyes - Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Skin - Severe irritant	Rabbit	-	24 hours 5 mg	-
2-(3,4-epoxycyclohexyl) ethyltrimethoxysilane	Skin - Mild irritant	Rabbit	-	500 mg	-

Sensitiser

Conclusion/Summary : Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

It has been observed that the carcinogenic hazard of this product arises when respirable dust is inhaled in quantities leading to significant impairment of particle clearance mechanisms in the lung.

Conclusion/Summary : Not available.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Agilent Torr Seal - part A - Epoxy Resin 2,2'-[methylenebis(p-phenyleneoxymethylene)]bisoxirane	Category 3	-	Respiratory tract irritation
Agilent Torr Seal - part B - Hardener 4,4'-isopropylidenediphenol	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Agilent Torr Seal - part B - Hardener Quartz (SiO ₂)	Category 1	inhalation	lungs
2-piperazin-1-ylethylamine	Category 1	-	-

Aspiration hazard

Not available.

Information on likely routes of exposure : Agilent Torr Seal - part A Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
- Epoxy Resin
Agilent Torr Seal - part B Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.
- Hardener

Potential acute health effects

Inhalation : Agilent Torr Seal - part A No known significant effects or critical hazards.
- Epoxy Resin
Agilent Torr Seal - part B No known significant effects or critical hazards.
- Hardener

Ingestion : Agilent Torr Seal - part A No known significant effects or critical hazards.
- Epoxy Resin
Agilent Torr Seal - part B Corrosive to the digestive tract. Causes burns.
- Hardener

SECTION 11: Toxicological information

- Skin contact** : Agilent Torr Seal - part A Causes skin irritation. May cause an allergic skin reaction.
 - Epoxy Resin
 Agilent Torr Seal - part B Causes severe burns. May cause an allergic skin reaction.
 - Hardener
- Eye contact** : Agilent Torr Seal - part A Causes serious eye irritation.
 - Epoxy Resin
 Agilent Torr Seal - part B Causes serious eye damage.
 - Hardener

Symptoms related to the physical, chemical and toxicological characteristics

- Inhalation** : Agilent Torr Seal - part A No specific data.
 - Epoxy Resin
 Agilent Torr Seal - part B Adverse symptoms may include the following:
 - Hardener
 reduced foetal weight
 increase in foetal deaths
 skeletal malformations
- Ingestion** : Agilent Torr Seal - part A No specific data.
 - Epoxy Resin
 Agilent Torr Seal - part B Adverse symptoms may include the following:
 - Hardener
 stomach pains
 reduced foetal weight
 increase in foetal deaths
 skeletal malformations
- Skin contact** : Agilent Torr Seal - part A Adverse symptoms may include the following:
 - Epoxy Resin
 irritation
 redness
 Agilent Torr Seal - part B Adverse symptoms may include the following:
 - Hardener
 pain or irritation
 redness
 blistering may occur
 reduced foetal weight
 increase in foetal deaths
 skeletal malformations
- Eye contact** : Agilent Torr Seal - part A Adverse symptoms may include the following:
 - Epoxy Resin
 pain or irritation
 watering
 redness
 Agilent Torr Seal - part B Adverse symptoms may include the following:
 - Hardener
 pain
 watering
 redness

Delayed and immediate effects as well as 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** : Not available.

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SECTION 11: Toxicological information

General	: Agilent Torr Seal - part A - Epoxy Resin Agilent Torr Seal - part B - Hardener	Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity	: Agilent Torr Seal - part A - Epoxy Resin Agilent Torr Seal - part B - Hardener	No known significant effects or critical hazards. No known significant effects or critical hazards.
Mutagenicity	: Agilent Torr Seal - part A - Epoxy Resin Agilent Torr Seal - part B - Hardener	No known significant effects or critical hazards. No known significant effects or critical hazards.
Reproductive toxicity	: Agilent Torr Seal - part A - Epoxy Resin Agilent Torr Seal - part B - Hardener	No known significant effects or critical hazards. May damage fertility.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Agilent Torr Seal - part A - Epoxy Resin reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)	Acute EC50 9.4 mg/l Fresh water	Algae	72 hours
Agilent Torr Seal - part B - Hardener 2,2'-iminodiethylamine	Acute LC50 53500 µg/l Fresh water	Daphnia - Water flea - <i>Daphnia magna</i>	48 hours
4,4'-isopropylidenediphenol	Acute LC50 1014000 µg/l Fresh water	Fish - Guppy - <i>Poecilia reticulata</i>	96 hours
	Acute EC50 1.506 mg/l Marine water	Algae - Dinoflagellate - <i>Prorocentrum minimum</i> - Exponential growth phase	72 hours
	Acute EC50 1000 µg/l Marine water	Algae - Diatom - <i>Skeletonema costatum</i>	96 hours
	Acute EC50 7.3 mg/l Fresh water	Daphnia - Water flea - <i>Daphnia magna</i> - Neonate	48 hours
	Acute LC50 50.4 µg/l Marine water	Crustaceans - Brine shrimp - <i>Artemia sinica</i>	48 hours
	Acute LC50 3.5 mg/l Marine water	Fish - Rivulus - <i>Rivulus marmoratus</i> - Embryo	96 hours
	Chronic NOEC 2 mg/l Fresh water	Algae - Algae - <i>Chlorolobion braunii</i> - Exponential growth phase	4 days
2-piperazin-1-ylethylamine	Chronic NOEC 10 µg/l Marine water	Crustaceans - Harpacticoid copepod - <i>Tigriopus japonicus</i> - Nauplii	21 days
	Chronic NOEC 30 µg/l Fresh water	Daphnia - Water flea - <i>Daphnia magna</i> - Neonate	21 days
	Chronic NOEC 0.2 µg/l Fresh water	Fish - Goldfish - <i>Carassius auratus</i> - Adult	90 days
	Acute LC50 2190000 µg/l Fresh water	Fish - Fathead minnow - <i>Pimephales promelas</i>	96 hours

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Torr Seal, Part Number 9530001

SECTION 12: Ecological information

Product/ingredient name	Test	Result	Dose	Inoculum
Agilent Torr Seal - part A - Epoxy Resin reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)	OECD 301F Ready Biodegradability - Manometric Respirometry Test	5 % - Not readily - 28 days	-	-
Agilent Torr Seal - part B - Hardener 4,4'-isopropylidenediphenol	OECD 301F Ready Biodegradability - Manometric Respirometry Test	74.7 to 81.4 % - Readily - 28 days	-	-
2-piperazin-1-ylethylamine	OECD 301F Ready Biodegradability - Manometric Respirometry Test	0 % - Not readily - 28 days	-	-

Conclusion/Summary : Not available.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Agilent Torr Seal - part A - Epoxy Resin reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)	-	-	Not readily
Agilent Torr Seal - part B - Hardener 2,2'-iminodiethylamine 4,4'-isopropylidenediphenol 2-piperazin-1-ylethylamine 2-(3,4-epoxycyclohexyl) ethyltrimethoxysilane	Marine water 2 to 4 days, pH 8, 20°C - - -	- - - -	Readily Readily Not readily Not readily

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Agilent Torr Seal - part A - Epoxy Resin reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)	2.64 to 3.78	31	Low
Agilent Torr Seal - part B - Hardener 2,2'-iminodiethylamine 4,4'-isopropylidenediphenol 2-piperazin-1-ylethylamine	-5.58 3.4 -1.48	2.8 to 6.3 20 to 67 -	Low Low Low

12.4 Mobility in soil

Torr Seal, Part Number 9530001

SECTION 12: Ecological information

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

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

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


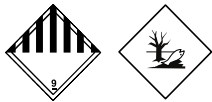

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

Packaging

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

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

SECTION 14: Transport information

	ADR/RID	IMDG	IATA
14.1 UN number	UN3316	UN3316	UN3316
14.2 UN proper shipping name	CHEMICAL KIT	CHEMICAL KIT	Chemical kit
14.3 Transport hazard class(es)	9 	9 	9 
14.4 Packing group	II	II	II
14.5 Environmental hazards	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

Additional information

ADR/RID : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Hazard identification number 90
Limited quantity See SP 251
Special provisions 251, 340, 671
Tunnel code (E)

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SECTION 14: Transport information

- IMDG** : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Emergency schedules F-A, _S-P_
Special provisions 251, 340
- IATA** : The environmentally hazardous substance mark may appear if required by other transportation regulations.
Quantity limitation Passenger and Cargo Aircraft: 10 kg. Packaging instructions: 960.
 Cargo Aircraft Only: 10 kg. Packaging instructions: 960. Limited Quantities - Passenger Aircraft: 1 kg. Packaging instructions: Y960.
Special provisions A44, A163

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture UK (GB)/REACH

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

Intrinsic property	Ingredient name	Status	Reference number	Date of revision
Agilent Torr Seal - part B - Hardener Toxic to reproduction Substance of equivalent concern for human health Substance of equivalent concern for environment	4,4'-isopropylidenediphenol	Candidate	-	1/12/2017
	4,4'-isopropylidenediphenol	Candidate	-	1/12/2017
	4,4'-isopropylidenediphenol	Candidate	-	1/12/2017

Ozone depleting substances

Not listed.

Prior Informed Consent (PIC)

Not listed.

Persistent Organic Pollutants

Not listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Product / Ingredient name	Identifiers	Status
Agilent Torr Seal - part A - Epoxy Resin Agilent Torr Seal - part A - Epoxy Resin		3
Agilent Torr Seal - part B - Hardener Agilent Torr Seal - part B - Hardener		3
4,4'-isopropylidenediphenol		30
		30
		66

Torr Seal, Part Number 9530001

SECTION 15: Regulatory information

Label : Agilent Torr Seal - part A - Epoxy Resin Not applicable.
 Agilent Torr Seal - part B - Hardener Restricted to professional users.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category

Agilent Torr Seal - part A - Epoxy Resin
E2

Agilent Torr Seal - part B - Hardener
E2

National regulations

Product/ingredient name	List name	Name on list	Classification	Notes
Agilent Torr Seal - part B - Hardener Quartz (SiO2)	UK Occupational Exposure Limits EH40 - WEL	silica, respirable crystalline respirable fraction	Carc.	-

EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments might still be required.

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

United States : Not determined.

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SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms

- : ATE = Acute Toxicity Estimate
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- DMEL = Derived Minimal Effect Level
- DNEL = Derived No Effect Level
- EUH statement = CLP-specific Hazard statement
- N/A = Not available
- PBT = Persistent, Bioaccumulative and Toxic
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number
- vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification

Classification	Justification
Agilent Torr Seal - part A - Epoxy Resin Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411	Calculation method Calculation method Calculation method Calculation method
Agilent Torr Seal - part B - Hardener Skin Corr. 1B, H314 Skin Sens. 1, H317 Repr. 1B, H360F Aquatic Chronic 2, H411	Calculation method Calculation method Calculation method Calculation method

Full text of abbreviated H statements

Agilent Torr Seal - part A - Epoxy Resin	
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
Agilent Torr Seal - part B - Hardener	
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H360F	May damage fertility.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Full text of classifications

Torr Seal, Part Number 9530001

SECTION 16: Other information

**Agilent Torr Seal -
part A - Epoxy Resin**

Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Carc. 2	CARCINOGENICITY - Category 2
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

**Agilent Torr Seal -
part B - Hardener**

Acute Tox. 3	ACUTE TOXICITY - Category 3
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Carc. 2	CARCINOGENICITY - Category 2
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Muta. 2	GERM CELL MUTAGENICITY - Category 2
Repr. 1B	REPRODUCTIVE TOXICITY - Category 1B
Repr. 2	REPRODUCTIVE TOXICITY - Category 2
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Sens. 1	SKIN SENSITISATION - Category 1
Skin Sens. 1B	SKIN SENSITISATION - Category 1B
STOT RE 1	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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Version : 4

Notice to reader

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