

1. IDENTIFICATION

Product Identifier: ET-HP Resin (ET-HP22, ET-HP65, ETHP020R, ETHP050R, ETHP500R, ETHPR)
Recommended Use: Epoxy-Tie Adhesive – Epoxy Resin
Use Restrictions: None Known.

Company: Simpson Strong-Tie Australia Pty Limited
Address: Unit 1/16 Kenoma Place
 Arndell Park, NSW 2148
 Australia
Phone: +612 9831 7700
Website: www.strongtie.co.au
Emergency: 13 11 26

Company: Simpson Strong-Tie New Zealand
Address: 28 Arrenway Drive
 Albany, Auckland 0632
 New Zealand
Phone: +64 9 477 4440
Website: www.strongtie.co.nz
Emergency: 0800 POISON (0800 764 766)

2. HAZARD IDENTIFICATION

Classification

Physical Hazards: Not Classified.
Health Hazards: Skin Corrosion/Irritation Category 2
 Serious Eye Damage/Irritation Category 2A
 Sensitization, Skin Category 1
 Germ Cell Mutagenicity Category 2
Environmental Hazards: Chronic Aquatic Environmental Hazard Category 2

Label Elements



Health Hazard



Exclamation Mark



Environment

Signal Word: **WARNING!**
Hazard Statements: Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction. Suspected of causing genetic defects. Toxic to aquatic life with long lasting effects.
Precautionary Statements:
Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing/eye protection/face protection. Contaminated work clothing should not be allowed out of the workplace. Avoid breathing mist or vapor. Wash thoroughly after handling. Avoid release to the environment.
Response: If exposed or concerned: Call a poison center/doctor. If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before re-use. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Collect Spillage.
Storage: Store locked up. Store in a well-ventilated place. Store between 45-90°F (7-32°C).
Disposal: Dispose of contents in accordance with local/regional/national regulations.
Other hazards which do not result in classification: None known.

The above hazards are for the uncured Resin component of SET. Upon combination with the Hardener component of SET an innocuous solid is formed which does not present any immediate hazards. Upon grinding or cutting the cured product the following hazards may apply.



Health
Hazard

Health Hazards: STOT, repeated exposure Category 2 (Lung)
Hazard Statements: May cause cancer. May cause damage to organs (Lung) through prolonged or repeated exposure.
Precautionary Statements: Do not breathe dust.

3. COMPOSITION INFORMATION

Chemical Name	CAS Number	Weight %
Bisphenol A/Epichlorohydrin	25068-38-6	30-60
Phenol, polymer with formaldehyde, glycidyl ether	28064-14-4	10-30
Butyl Glycidyl Ether	2426-08-6	< 10
Titanium Dioxide	13463-67-7	< 10

Composition Note: This product is a mixture. Hazardous ingredients are listed above. May include other nonhazardous ingredients. May include other trace ingredients, see Section 15.

4. FIRST-AID MEASURES

Eye Contact: Immediately flush eyes with plenty of cool water for at least 15 minutes while holding the eyes open. Remove contact lenses if present and easy to do. If redness, burning, blurred vision, or swelling persists, **consult a physician.**

Skin Contact: Remove contaminated clothing and product, immediately wash affected area with soap and water. Do not apply greases or ointments. Chemical burns must be treated by a **physician.**

Ingestion: Rinse mouth immediately. Give large amounts of milk or water, if person is conscious. Only induce vomiting at the instruction of medical personnel. **Consult a physician.**

Inhalation: Remove patient to fresh air. Give oxygen or artificial respiration if needed. If patient continues to experience difficulty breathing, **consult a physician.**

Most Important Symptoms: Irritant effects. Sensitization. Symptoms include itching, burning, redness and tearing.

General Information: Provide general supportive measures and treat symptomatically. Symptoms may be delayed. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. If exposed or concerned: Get medical advice/attention. Wash contaminated clothing before reuse.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Extinguish with foam, carbon dioxide, dry powder, or water fog.

Additional Information: None known.

Hazards during Fire-Fighting: Hazardous decomposition products may occur when materials polymerize at temperatures above 500°F (260°C). Do not allow run-off from fire-fighting to enter drains or water courses.

Fire-Fighting Procedures: Use standard fire-fighting procedures and consider the hazards of other involved materials. In case of fire and/or explosion do not breathe fumes. Self-contained breathing apparatus and full protective clothing must be worn. Move containers from fire area if you can do so without risk. Cool containers with flooding quantities of water until well after fire is out. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

HAZCHEM Code: 3Z

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Keep unnecessary personnel away. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of vapors or mists. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.

Clean-up Methods: **Small spills:** Wipe up with absorbent material (e.g. cloth, fleece). Place in leak-proof containers. Seal tightly for proper disposal. Clean surface thoroughly to remove residual contamination.
Large spills: Stop the flow of material, if this is without risk. Dike far ahead of spill. Use a non-combustible material like vermiculite, sand or earth to soak up the product. Place in leak-proof containers. Seal tightly for proper disposal. Following product recovery, flush area with water. Prevent entry into waterways, sewer, basements or confined areas.

Environmental Precautions: Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so.

7. HANDLING AND STORAGE

Handling: Mechanical ventilation or local exhaust ventilation is recommended. Keep away from open flames, hot surfaces and sources of ignition. Wear appropriate personal protective equipment. Pregnant women should not work with the product, if there is the least risk of exposure. Avoid any exposure. When using, do not eat, drink or smoke. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Observe good industrial hygiene practices.

Storage: Keep in original container. Keep container tightly closed. Store in a dry place out of direct sunlight. Store between 45-90°F (7-32°C). Keep away from heat and sources of ignition. Separate from acids and oxidizing materials. Store in a well-ventilated place. Store locked up. Keep out of the reach of children.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters: Follow standard monitoring procedures.

Exposure Limits:

Component	Australia National Workplace OELs	New Zealand WES
N-Butyl Glycidyl Ether * (2426-08-6)	25 ppm (TWA)	25 ppm (TWA)
Titanium Dioxide (13463-67-7)	10 mg/m ³ (inhalable, TWA)	10 mg/m ³ (inhalable, TWA)
Component	US. ACGIH (TLV)	UK EH40 WELs
N-Butyl Glycidyl Ether * (2426-08-6)	3 ppm (TWA)	N/E
Titanium Dioxide (13463-67-7)	10 mg/m ³ (TWA)	4 mg/m ³ (respirable, TWA) 10 mg/m ³ (inhalable, TWA)

***Skin Designation:** Material can be absorbed through the skin.

Biological Limit Values: No biological exposure limits noted for the ingredients.
Exposure Guidelines: No exposure standards allocated.
Engineering Controls: Mechanical ventilation or local exhaust ventilation is recommended. Ventilation rates should be matched to conditions. Provide eyewash station.
After Cure: Product forms an innocuous solid. Processing after cure (grinding or cutting) may produce dust containing compounds that present an inhalation hazard.

Protective Measure: Wear appropriate personal protective equipment.
Eye Protection: Wear chemical splash goggles or safety glasses with side shield.
Hand Protection: Wear chemical-resistant gloves such as: Nitrile, neoprene, butyl.
Skin and Body Protection: Wear long sleeve shirt/long pants and other clothing as required to minimize contact.
Respirator Protection: The use of a respirator is not required during normal use of this product. If grinding or cutting cured product the use of an approved respirator is recommended.
General Hygiene: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid	Freezing/Melting Point: N/A
Form: Paste	Boiling Point: > 500 °F (>260 °C)
Color: White	Flash Point: >250 °F (121.1 °C) Open Cup
Odor: Sweet	Evaporation Rate: N/A
Odor Threshold: N/A	Specific Gravity: 1.21 at 72°F (22°C)
pH: 6.9	VOC (after cure): 35 g/L
Flammability: N/A	U/L Flammability: N/A
Vapor Pressure: Non-volatile	Vapor Density: N/A
Solubility: Insoluble	Kow: N/A
Decomposition: N/A	Viscosity: N/A

10. STABILITY AND REACTIVITY

Reactivity: This product is stable and non-reactive under normal conditions.
Chemical Stability: Stable under normal storage conditions.
Condition to Avoid: High heat and open flame.
Substances to Avoid: Oxidizing agents, acids, organic bases, and amines.
Hazardous Reactions: Hazardous polymerization does not occur.
Decomposition Products: Carbon dioxide, carbon monoxide, oxides of nitrogen, and other organic compounds.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Ingestion: Ingestion may cause irritation to the gastrointestinal tract.
Inhalation: This material is a viscous liquid to semi-solid which does not easily form vapors. Inhalation of dust from grinding or cutting cured product may irritate the respiratory tract.
Skin contact: Causes skin irritation. May cause an allergic skin reaction.
Eye contact: Causes serious eye irritation.

Early Onset Symptoms: Irritant effects. Sensitization. Symptoms include itching, burning, redness, and tearing.

Information on toxicological effects

Acute toxicity: Not expected to be acutely toxic.

Product	Species	Test Result
SET Resin (CAS mixture)	Acute, Dermal, LC50	Rabbit >2000 mg/kg
	Acute, Oral, LD50	Rat >5000 mg/kg

Skin corrosion/irritation: Causes skin irritation.
Eye damage/eye irritation: Causes serious eye irritation.
Respiratory sensitization: No data available.
Skin sensitization: May cause an allergic skin reaction.
Germ cell mutagenicity: Contains a component that is suspected of causing genetic defects.

Carcinogenicity: May cause cancer. Both the resin and hardener components of this product contain components that are listed carcinogens. Quartz and Titanium Dioxide are considered carcinogens only in their inhalable form. Due to the nature of this product inhalation is highly unlikely from the uncured material. Exposure to respirable Quartz and Titanium Dioxide is likely only when grinding or cutting solid cured product, ensure good work practice and use of personal protective equipment as needed to control exposure.

IARC Monographs. Overall Evaluation of Carcinogenicity

Quartz (14808-60-7) 1 Carcinogenic to humans.
 Titanium Dioxide (13463-67-7) 2B Possibly Carcinogenic to humans.

ACGIH Carcinogens

Quartz (14808-60-7) A2 Suspected human carcinogen.
 Titanium Dioxide (13463-67-7) A4 Not classifiable as a human carcinogen.

Reproductive toxicity: No data available.

Aspiration hazard: No data available.

Specific target organ toxicity:

Single exposure No data available.

Repeated exposure No data available.

Further information: Toxicological, ecotoxicological, physical, and chemical properties may not have been fully investigated. Hazard data above is estimated based on best available information. Some workers with certain pre-existing medical conditions such as: asthma, allergies, or impaired pulmonary and/or liver functions, or who may be particularly susceptible to this material, may be affected by exposure to this material.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Information given is based on component data and the ecotoxicity of similar products. Product is classified as toxic to aquatic life with long lasting effects. Avoid release to the environment.

Component	Species	Test Result
SET Resin (CAS mixture)		
Aquatic Acute, Algae, EC50	Algae	>1000 mg/l, 72 hours
Aquatic Acute, Crustacea, EC50	Daphnia Magna	324.87 mg/l, 48 hours
Aquatic Acute, Fish, LC50	Fish	707.11 mg/l, 96 hours

Persistence and degradability: This product is not expected to be readily biodegradable.

Bioaccumulative potential: No data available for this product.

Partition coefficient n-octanol / water (log Kow)

Butyl glycidyl ether (2426-08-6) 0.63

Bioconcentration Factor (BCF): Not available.

Mobility: The product is insoluble in water. This product is non-volatile.

Other adverse effects: No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this product.

13. DISPOSAL CONSIDERATIONS

Waste Disposal of Substance: Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Container Disposal: Empty containers or liners may retain some product residues; follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

Disposal of Cured Product: Grind or chip off surface. The solid material does not require special disposal consideration.

14. TRANSPORTATION INFORMATION

ADG:

UN number UN3082
UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(BisphenolA/Epichlorohydrin)
Transport hazard class(es) 9
Packing Group III
Environmental hazards Yes
HAZCHEM Code D3Z

RID:

UN number UN3082
UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(BisphenolA/Epichlorohydrin)
Transport hazard class(es) 9
Labels 9
Packing Group III
Environmental hazards Yes
HAZCHEM Code D3Z

IATA:

UN number UN3082
UN proper shipping name Environmentally hazardous substance, liquid, n.o.s. (Bisphenol A/Epichlorohydrin), 9, III
Transport hazard class(es) 9
Packing Group III
Environmental hazards Yes
Labels required 9
ERG Code 9L

IMDG :

UN number UN3082
UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(BisphenolA/Epichlorohydrin), 9, III, Marine Pollutant
Transport hazard class(es) 9
Packing Group: III
Environmental Hazards
Marine pollutant Yes
Labels required 9
EmS F-A, S-F

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available.

15. REGULATORY INFORMATION

Australian National Regulations

This SDS was prepared following the Code of Practice: Preparation of Safety Data Sheets for Hazardous Chemicals from Work Safe Australia. This product has been classified according to the hazard criteria of GHS and contains all of the information required by WHS.

No poisons schedule number was allocated for any Australian Medicines & Poisons Appendix.

ET-HP[®] Anchoring Adhesive

SAFETY DATA SHEET



High Volume Industrial Chemicals (HVIC)

Titanium Dioxide (13463-67-7) 100000-999999 tonnes (see the regulation for additional information)

This product is not subject to or not applicable for any of the following International Regulations; **Stockholm Convention, Rotterdam, Convention, Kyoto Protocol, Montreal Protocol, Basel Convention.**

New Zealand National Regulations

New Zealand Code of Practice for the Preparation of Safety Data Sheets (SDS) [No. HSNO CoP 8-1 09-06].

Classified as hazardous according to the Hazardous Substances (minimum Degrees of Hazard) Regulations 2001.

HSNO: 6.3A-Skin Corrosion/Irritation; 8.3A Eye Corrosion/Irritation; 6.5B Skin Sensitization; 6.6B Suspected Mutagen; 6.7A Suspected Carcinogen; 9.1B Aquatic Toxicity

New Zealand Inventory of Chemicals (NZIoC)

Chemical	Registration Status
Butyl Glycidyl Ether (CAS 2426-08-6)	HSNO Approved (HSR002921)
Phenol, polymer with formaldehyde, glycidyl ether (CAS 28064-14-4)	May be used as a single component chemical under an appropriate group standard
Bisphenol A/Epichlorohydrin Resin (CAS 25068-38-6)	HSNO Approved (HSR003180)
Titanium Dioxide (CAS 13463-67-7)	May be used as a single component chemical under an appropriate group standard

International Inventories

Country or Region	Inventory	On Inventory? (Yes/No)
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

16. OTHER INFORMATION

Date Prepared or Revised: May 2014

Prepared by: Simpson Strong-Tie Co. | 5956 W. Las Positas Blvd Pleasanton, CA 94588 USA

This Safety Data Sheet (SDS) is prepared by Simpson Strong-Tie Co. The information it contains is offered in good faith as accurate as of the date of this SDS. This SDS is provided solely for the purpose of conveying health, safety, and environmental information. No warranty, expressed or implied, is given. Health and Safety precautions may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations.

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1. IDENTIFICATION

Product Identifier: ET-HP Hardener (ET-HP22, ET-HP56, ETHP020H, ETHP050H, ETHP500H, ETHPH)
Recommended Use: Epoxy-Tie Adhesive – Epoxy Hardener
Use Restrictions: None Known.

Company:	Simpson Strong-Tie Australia Pty Limited
Address:	Unit 1/16 Kenoma Place Arndell Park, NSW 2148 Australia
Phone:	+612 9831 7700
Website:	www.strongtie.co.au
Emergency:	13 11 26

Company:	Simpson Strong-Tie New Zealand
Address:	28 Arrenway Drive Albany, Auckland 0632 New Zealand
Phone:	+64 9 477 4440
Website:	www.strongtie.co.nz
Emergency:	0800 POISON (0800 764 766)

2. HAZARD IDENTIFICATION

Classification

Physical Hazards:	Not Classified.	
Health Hazards	Skin Corrosion/Irritation	Category 2
	Serious Eye Damage/Irritation	Category 1
	Sensitization, Skin	Category 1
	Germ Cell Mutagenicity	Category 2
	Reproductive Toxicity (Fertility)	Category 2
	STOT, Repeated Exposure (kidney, liver, nervous system, skin)	Category 2
Environmental Hazards:	Acute Aquatic Environmental Hazard	Category 2
	Chronic Aquatic Environmental Hazard	Category 2

Label Elements



Corrosion



Health
Hazard



Environment

Signal Word: **DANGER!**

Hazard Statements: Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. Suspected of causing genetic defects. Suspected of damaging fertility. May cause damage to organs (kidney, liver, nervous system, skin) through prolonged or repeated exposure. Toxic to aquatic life with long lasting effects.

Precautionary Statements:

Prevention: Obtain special instructions before use. Wear protective gloves/protective clothing/eye protection/face protection. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment.

Response: If exposed or concerned: Get medical advice/attention. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention if you feel unwell. Collect Spillage.

Storage: Store locked up. Store in a well-ventilated place. Store between 45-90°F (7-32°C).

Disposal: Dispose of contents in accordance with local/regional/national regulations.

Other hazards which do not result in classification: None known.

The above hazards are for the uncured Hardener component of ET-HP. Upon combination with the Resin component of ET-HP an innocuous solid is formed which does not present any immediate hazards. Upon grinding or cutting the cured product the following hazards may apply.



Health
Hazard

Health Hazards: Carcinogenicity Category 1A
STOT, repeated exposure Category 2 (Lung)

Hazard Statements: May cause cancer. May cause damage to organs (Lung) through prolonged or repeated exposure.

Precautionary Statements: Do not breathe dust.

3. COMPOSITION INFORMATION

Chemical Name	CAS Number	Weight %
2-Piperazin-1-ylethylamine	140-31-8	5-15
4,4'-isopropylidenediphenol	80-05-7	5-10
2,4,6-Tris-(dimethylaminomethyl)-phenol	90-72-2	1-10
Nonylphenol	84852-15-3	1-10
Phenol	108-95-2	1-10
Crystalline Silica, Quartz	14808-60-7	5-10
diisopropyl-1,1'-biphenyl	69009-90-1	1-10
m-Phenylenebis(methylamine)	1477-55-0	1-10

Composition Note: This product is a mixture. Hazardous ingredients are listed above. May include other nonhazardous ingredients. May include other trace ingredients, see Section 15.

4. FIRST-AID MEASURES

Eye Contact: Immediately flush eyes with plenty of cool water for at least 15 minutes while holding the eyes open. Remove contact lenses if present and easy to do. If redness, burning, blurred vision, or swelling persists, **consult a physician.**

Skin Contact: Remove contaminated clothing and product, immediately wash affected area with soap and water. Do not apply greases or ointments. Chemical burns must be treated by a **physician.**

Ingestion: Rinse mouth immediately. Do not induce vomiting. **Consult a physician.**

Inhalation: Remove patient to fresh air. Give oxygen or artificial respiration if needed. If patient continues to experience difficulty breathing, **consult a physician.**

Most Important Symptoms: Irritant effects. May cause severe irritation or burns to the eyes, skin, gastrointestinal tract, and respiratory system. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause allergic skin reaction. Rash.

General Information: Provide general supportive measures and treat symptomatically. Symptoms may be delayed. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. If exposed or concerned: Get medical advice/attention. Wash contaminated clothing before reuse.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Extinguish with foam, carbon dioxide, dry powder, or water fog.

Additional Information: Do not use water jet as an extinguisher as this will spread the fire.

Hazards during Fire-Fighting: Irritating and toxic gases/fumes may be released during a fire. Water run-off can cause environmental damage.

Fire-Fighting Procedures: In case of fire and/or explosion do not breathe fumes. Self-contained breathing apparatus and full protective clothing must be worn. Move containers from fire area if you can do so without risk. Cool containers with flooding quantities of water until well after fire is out. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

HAZCHEM Code: 3Z

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of vapors or mists. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.

Clean-up Methods: **Small spills:** Wipe up with absorbent material (e.g. cloth, fleece). Place in leak-proof containers. Seal tightly for proper disposal. Clean surface thoroughly to remove residual contamination.
Large spills: Stop the flow of material, if this is without risk. Dike far ahead of spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product. Place in leak-proof containers. Seal tightly for proper disposal. Following product recovery, flush area with water. Prevent entry into waterways, sewer, basements or confined areas.

Environmental Precautions: Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so.

7. HANDLING AND STORAGE

Handling: Keep away from open flames, hot surfaces and sources of ignition. Wear appropriate personal protective equipment. When using, do not eat, drink or smoke. Avoid contact with eyes, skin, and clothing. Observe good industrial hygiene practices.

Storage: Store in a closed container away from incompatible materials. Keep in original container. Keep container tightly closed. Store in a dry place out of direct sunlight. Store between 45-90°F (7-32°C). Keep away from heat and sources of ignition. Store in a well-ventilated place. Store locked up.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters: Follow standard monitoring procedures.
Exposure Limits:

Component	Australia National Workplace OELs	New Zealand WES
m-Phenylenebis(methylamine) * (CAS 1477-55-0)	0.1 mg/m ³ (ceiling)	0.1 mg/m ³ (ceiling)
Phenol* (CAS 108-95-2)	1 ppm (TWA)	5 ppm (TWA)
Quartz (14808-60-7)	0.1 mg/m ³ (respirable, TWA)	0.2 mg/m ³ (respirable, TWA)
Component	US. ACGIH (TLV)	UK EH40 WELs
m-Phenylenebis(methylamine) * (CAS 1477-55-0)	0.1 mg/m ³ (ceiling)	N/E
Phenol* (CAS 108-95-2)	5 ppm (TWA)	2 ppm (TWA) 4 ppm (STEL)
Quartz (14808-60-7)	0.025 mg/m ³ (respirable, TWA)	0.1 mg/m ³ (respirable, TWA)

Skin Designation: Material can be absorbed through the skin.

Biological Limit Values: No biological exposure limits noted for the ingredients.
Engineering Controls: When using indoors good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Provide eyewash station.
After Cure: Once a product has been cured the solid is not expected to present an immediate hazard. Processing after cure (grinding or cutting) may produce dust containing compounds that present an inhalation hazard.
Protective Measure: Wear appropriate personal protective equipment.
Eye Protection: Wear chemical splash goggles or safety glasses with side shield.
Hand Protection: Wear chemical-resistant gloves such as: Nitrile, neoprene, butyl.
Skin and Body Protection: Wear long sleeve shirts/long pants and other clothing as required to minimize contact.
Respirator Protection: Wear positive pressure self-contained breathing apparatus (SCBA).
General Hygiene: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid	Freezing/Melting Point: N/A
Form: Paste	Boiling Point: N/A
Color: Black	Flash Point: 225 °F (107 °C) Open Cup
Odor: Ammonia	Evaporation Rate: N/A
Odor Threshold: N/A	Specific Gravity: 1.36 at 72°F (22°C)
pH: 10.2	VOC (after cure): 35 g/L
Flammability: N/A	U/L Flammability: N/A
Vapor Pressure: N/A	Vapor Density: N/A
Solubility: Slight	Kow: N/A
Decomposition: N/A	Viscosity: N/A

10. STABILITY AND REACTIVITY

Reactivity: This product is stable and non-reactive under normal conditions.
Chemical Stability: Stable under normal storage conditions.
Condition to Avoid: High heat and open flame.
Substances to Avoid: Strong oxidizing agents. Peroxides. Phenols. Acids.
Hazardous Reactions: The product is stable if stored and handled as prescribed/indicated.
Decomposition Products: Carbon dioxide, carbon monoxide, oxides of nitrogen, and other organic compounds.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Ingestion: Causes digestive tract burns.
Inhalation: Inhalation of dust from cutting/grinding cured product may irritate the respiratory tract.
Skin contact: Causes severe skin burns. May cause an allergic skin reaction.
Eye contact: Causes serious eye damage.

Early Onset Symptoms: Irritant effects. May cause severe skin irritation or burns to the eyes, skin, gastrointestinal tract, and respiratory system. May cause an allergic skin reaction. Rash.

Information on toxicological effects

Acute toxicity: Not expected to be acutely toxic.

Product	Species	Test Result
2-Piperazin-1-ylethylamine (CAS 140-31-8) <i>Acute, Dermal, LD50</i>	Rabbit	880 mg/kg
4,4'-isopropylidenediphenol (CAS 80-05-7) <i>Acute, Oral, LD50</i>	Rat	3300 mg/kg
	Mouse	2500 mg/kg
Nonylphenol (CAS 84852-15-3) <i>Acute, Dermal, LD50</i>	Rabbit	2140 mg/kg
	Rat	1600 mg/kg

Phenol (CAS 108-95-2)	Acute, Dermal , LD50	Rabbit	850 mg/kg
	Acute, Oral , LD50	Rat	317 mg/kg
m-Phenylenebis(methylamine) (CAS 1477-55-0)	Acute, Dermal , LD50	Rabbit	2000 mg/kg
	Acute, Inhalation , LC50	Rat	700 ppm, 1 hour
	Acute, Oral , LD50	Rat	930 mg/kg

Skin corrosion/irritation: Causes skin irritation.
Eye damage/eye irritation: Causes serious eye damage.
Respiratory sensitization: No data available.
Skin sensitization: May cause an allergic skin reaction.
Germ cell mutagenicity: Suspected of causing genetic defects.
Carcinogenicity: May cause cancer. Both the resin and hardener components of this product contain components that are listed carcinogens. Quartz and Titanium Dioxide are considered carcinogens only in their inhalable form. Due to the nature of this product inhalation is highly unlikely from the uncured material. Exposure to respirable Quartz and Titanium Dioxide is likely only when grinding or cutting solid cured product, ensure good work practice and use of personal protective equipment as needed to control exposure.
IARC Monographs. Overall Evaluation of Carcinogenicity
 Quartz (14808-60-7) 1 Carcinogenic to humans.
 Titanium Dioxide (13463-67-7) 2B Possibly Carcinogenic to humans.
 Phenol (CAS 108-95-2) 3 Not classifiable as a human carcinogen.
ACGIH Carcinogens
 Quartz (14808-60-7) A2 Suspected human carcinogen.
 Titanium Dioxide (13463-67-7) A4 Not classifiable as a human carcinogen
 Phenol (CAS 108-95-2) A4 Not classifiable as a human carcinogen
Reproductive toxicity: Suspected of damaging fertility.
Aspiration hazard: Not applicable due to the physical form of the product.
Specific target organ toxicity:
Single exposure No data available.
Repeated exposure May cause damage to organs (kidney, Liver, Lung, nervous system, skin) through prolonged or repeated exposure.
Further information: Toxicological, ecotoxicological, physical, and chemical properties may not have been fully investigated. Hazard data above is estimated based on best available information. Some workers with certain pre-existing medical conditions such as: asthma, allergies, or impaired pulmonary and/or liver functions, or who may be particularly susceptible to this material, may be affected by exposure to this material.

12. ECOLOGICAL INFORMATION

Ecotoxicity: Information is based on data on the components and ecotoxicology of similar products. Product is classified as toxic to aquatic life with long lasting effects. Avoid release to the environment.

Component	Species	Test Result
2-Piperazin-1-ylethylamine (140-31-8)		
Aquatic , Fish, LC50	Fathead Minnow	1950-2460 mg/l, 96 hours
4,4'-isopropylidenediphenol (CAS 80-05-7)		
Aquatic , Fish, LC50	Fathead Minnow	3.6-5.4 mg/l, 96 hours
Benzyl Alcohol (CAS 100-51-6)		
Aquatic , Fish, LC50	Bluegill	10 mg/l, 96 hours
Benzyl dimethylamine (CAS 103-83-3)		
Aquatic , Fish, LC50	Fathead Minnow	35.8-39.9 mg/l, 96 hours
Nonylphenol (CAS 84852-15-3)		
Aquatic , Crustacea, EC50	Clam	0.0379 mg/l, 48 hours
Aquatic , Fish, LC50	Winter Flounder	0.017 mg/l, 96 hours

Phenol (CAS 108-95-2)	Aquatic, Crustacea, EC50	Daphnia	4.7-6.4 mg/l, 48 hours
	Aquatic, Fish, LC50	Rainbow Trout	7.7 mg/l, 96 hours

Persistence and degradability: No data available.
Bioaccumulative potential: No data available.
Partition coefficient n-octanol / water (log Kow)
 Phenol (108-95-2) 1.46
 4,4'-isopropylidenediphenol (80-05-7) 3.32
 Nonylphenol (25154-52-3) 5.71
Mobility: This product is miscible in water.
Bioconcentration Factor (BCF): Not available.
Other adverse effects: No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this product.

13. DISPOSAL CONSIDERATIONS

Waste Disposal of Substance: Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Container Disposal: Empty containers or liners may retain some product residues; follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.
Disposal of Cured Product: Grind or chip off surface. Solid material does not need special disposal consideration.

14. TRANSPORTATION INFORMATION

ADG:

UN number UN3082
UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Nonylphenol)
Transport hazard class(es) 9
Packing Group III
Environmental hazards Yes
HAZCHEM Code D3Z

RID:

UN number UN3082
UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Nonylphenol),
Transport hazard class(es) 9
Labels 9
Packing Group III
Environmental hazards Yes

IATA:

UN number UN3082
UN proper shipping name Environmentally hazardous substance, liquid, n.o.s. (Nonylphenol), 9, III
Transport hazard class(es) 9
Packing Group III
Environmental hazards Yes
Labels required 9

IMDG:

UN number	UN3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Nonylphenol), 9, III, Marine Pollutant
Transport hazard class(es)	9
Packing Group:	III
Marine pollutant	Yes
Labels required	9
EmS	F-A, S-F

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

This substance/mixture is not intended to be transported in bulk

15. REGULATORY INFORMATION

Australian National Regulations

This SDS was prepared following the Code of Practice: Preparation of Safety Data Sheets for Hazardous Chemicals from Work Safe Australia. This product has been classified according to the hazard criteria of GHS and contains all of the information required by WHS.

Australian Medicines & Poisons Appendix E

Phenol (CAS 108-95-2) For advice, contact a Poisons information Centre (Phone eg Australia 131 - 126; New Zealand 03 - 4747 - 000) or a doctor (at once), If swallowed, do NOT induce vomiting. If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. If on skin, immediately remove any contaminated clothing, wash skin with methylated spirit or PEG (polyethylene glycol) 300 or 400 if available.

Australian Medicines & Poisons Appendix F

Phenol (CAS 108-95-2) Applies to all preparations in any concentration: Avoid contact with eyes, Avoid contact with skin; Wear protective gloves when mixing or using.

Australian Medicines & Poisons Schedule 2

Phenol (CAS 108-95-2) In preparations for human therapeutic use (exception may apply, see regulation)

Australian Medicines & Poisons Schedule 4

Phenol (CAS 108-95-2) In preparations for injection

Australian Medicines & Poisons Schedule 5

Phenol (CAS 108-95-2) As a natural component in essential oils (exception was applied to data)

Australian Medicines & Poisons Schedule 6

Phenol (CAS 108-95-2) Applies to all preparations in any concentration (exception may apply, see regulation)

Australian National Pollutant Inventory (NPI): Threshold Quantity

Phenol (CAS 108-95-52) 10 tonnes/yr (Threshold Category: 1)

High Volume Industrial Chemicals (HVIC)

4,4'-isopropylidenediphenol (CAS 80-05-7)	1000-9999 tonnes (see the regulation for additional information)
Nonylphenol (CAS 25154-52-3)	1000-9999 tonnes (see the regulation for additional information)
Phenol (CAS 108-95-2)	10000-99999 tonnes (see the regulation for additional information)
Quartz (CAS 14808-60-7)	1000-9999 tonnes (see the regulation for additional information)

This product is not subject to or not applicable for any of the following International Regulations; **Stockholm Convention, Rotterdam, Convention, Kyoto Protocol, Montreal Protocol, Basel Convention.**

New Zealand National Regulations

New Zealand Code of Practice for the Preparation of Safety Data Sheets (SDS) [No. HSNO CoP 8-1 09-06].
 Classified as hazardous according to the Hazardous Substances (minimum Degrees of Hazard) Regulations 2001.

HSNO: 6.3A Skin Corrosion/Irritation; 8.3A Eye Corrosion/Irritation; 6.5B Skin Sensitization; 6.6B Suspected Mutagen; 6.7A Carcinogenicity; 6.8B Suspected Reproductive Toxin; 6.9B Target Organ Effects; 9.1A Acute Aquatic Toxicity; 9.1A Aquatic Toxicity

New Zealand Inventory of Chemicals (NZIoC)

Chemical	Registration Status
2-Piperazin-1-ylethylamine (CAS 140-31-8)	HSNO Approved (HSR004013)
4,4,'-isopropylidenediphenol (CAS 80-05-7)	HSNO Approved (HSR003399)
m-Phenylenebis(methylamine) (CAS 1477-55-0)	May be used as a single component under an appropriate group standard
Nonylphenol (CAS 25154-52-3)	HSNO Approved (HSR003573)
Phenol (CAS 108-65-2)	HSNO Approved (HSR006982)
Quartz (CAS 14808-60-7)	HSNO Approved (HSR003125)

International Inventories

Country or Region	Inventory	On Inventory? (Yes/No)
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

16. OTHER INFORMATION

Date Prepared or Revised: May 2014

Prepared by: Simpson Strong-Tie Co. | 5956 W. Las Positas Blvd Pleasanton, CA 94588 USA

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