1. PRODUCT AND COMPANY IDENTIFICATION

Product name  CRACK-PAC® Injection Epoxy - Resin
Product code  Cartridges: ETIPAC10, ETIPAC10KT – ETIPAC10 Resin
Company name  Simpson Strong-Tie New Zealand
Address  28 Arrenway Drive
          Albany
          Auckland 0632
          New Zealand
Website  www.strongtie.co.nz
Telephone  +64 9 477 4440
Fax  +64 9 475 9724
Emergency telephone number  0800 POISON (0800 764 766)

Recommended use and Limitations on use

Recommended use  Low Viscosity Injection Epoxy

2. HAZARDS IDENTIFICATION

GHS classification

Physical hazards  Not classified.
Health hazards  Skin corrosion/irritation  Category 2
                Serious eye damage/eye irritation  Category 2A
                Sensitization, skin  Category 1
Environmental hazards  Hazardous to the aquatic environment, acute hazard  Category 2
                      Hazardous to the aquatic environment, long-term hazard  Category 2

Label elements

Symbols

Signal word  Warning

Hazard statements  Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction.
                   Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention  Avoid breathing mist or vapour. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment.

Response  IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. 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 away from incompatible materials.

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance or mixture  Mixture
### 4. FIRST AID MEASURES

**Inhalation** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

**Skin contact** Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists. Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes.

**Eye contact** Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if irritation develops or persists.

**Ingestion** Do NOT induce vomiting. Rinse mouth thoroughly. Never give anything by mouth to a victim who is unconscious or is having convulsions. Get medical attention if any discomfort occurs.

**Potential delayed effects** May cause skin and eye irritation. Symptoms include itching, burning, redness and tearing. In high concentrations, vapours are narcotic and may cause headache, fatigue, dizziness and nausea.

**Personal protection for first-aid responders** First aid personnel must be aware of own risk during rescue.

**Notes to physician** Persons with eye, skin, or respiratory disorders or unusual (hyper)sensitivity to chemicals may experience adverse reactions to this product. All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

### 5. FIRE-FIGHTING MEASURES

**Extinguishing media** Extinguish with foam, carbon dioxide, dry powder or water fog.

**Extinguishing media to avoid** None known.

**HAZCHEM Code** 2Y

**Specific hazards during fire fighting** Hazardous decomposition products may occur when materials polymerize at temperatures above 500°F. Do not allow run-off from fire fighting to enter drains or water courses.

**Special fire fighting procedures** Move containers from fire area if you can do it 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.

**Protection of fire-fighters** Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.


**Specific methods** Keep unnecessary personnel away. Use standard firefighting procedures and consider the hazards of other involved materials. Prevent runoff from fire control or dilution from entering streams, sewers or drinking water supply.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures** Wear appropriate personal protective equipment (See Section 8). Stop leak if possible without any risk. Immediately evacuate personnel to safe areas. Provide adequate ventilation.

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not allow to enter drains, sewers or watercourses. Contact local authorities in case of spillage to drain/aquatic environment.

**Spill cleanup methods** Remove sources of ignition. For waste disposal, see Section 13.

**Small Spills**: Soak up with absorbent material such as clay, sand or other suitable non-reactive material. Place in leak-proof containers. Seal tightly for proper disposal.
7. **HANDLING AND STORAGE**

**Handling**

**Precautions** Mechanical ventilation or local exhaust ventilation is required. Persons susceptible for allergic reactions should not handle this product. When using, do not eat, drink or smoke. Wash hands thoroughly after handling.

**Safe handling advice** Wear suitable protective clothing, gloves and eye/face protection.

**Prevention of fire and explosion** No specific recommendations.

**Storage**

**Suitable storage conditions** Keep away from heat, sparks and open flame. Keep container tightly closed. Protect against physical damage. Separate from acids and oxidizing materials. Keep out of the reach of children. Keep away from food, drink and animal feeding stuffs.

**Incompatible materials** Acids. Strong oxidizing materials.

8. **EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Workplace exposure limits**

**Exposure guidelines** No exposure standards allocated.

**Engineering controls** Mechanical ventilation or local exhaust ventilation is recommended. Eye wash facilities and emergency shower must be available when handling this product.

**Personal protective equipment**

**Respiratory protection** No protection is ordinarily required with adequate ventilation.

**Skin protection** Wear appropriate chemical resistant clothing.

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Radioactive or thermal hazards** Follow standard monitoring procedures.

**Hygiene measures** 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. Avoid contact with eyes.

9. **PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance** Blue liquid

**Physical state** Liquid.

**Colour** Blue.

**Odour** Strong acrid.

**Odour threshold** Not available.

**pH** 7

**Melting point/freezing point** Not available.

**Boiling point, initial boiling point, and boiling range** Not available.

**Flash point** > 121.1°C (> 250.0°F) Open cup

**Auto-ignition temperature** Not available.

**Flammability (solid, gas)** Not applicable.

**Flammability limit - lower (%)** Not available.

**Flammability limit - upper (%)** Not available.
Explosive limit - lower (%) Not available.
Explosive limit – upper (%) Not available.
Vapour pressure Not available.
Vapour density Not available.
Evaporation rate Not available.
Relative density Not available.
Density Not available.
Solubility Insoluble (in water).
Partition coefficient (n-octanol/water) No data available.
Decomposition temperature Not available.

10. STABILITY AND REACTIVITY

Stability Material is stable under normal conditions.
Conditions to avoid Incompatible materials, heat, and open flame.
Incompatible materials Oxidizing agents, acids, organic bases, and amines.
Possibility of hazardous reactions Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity Causes skin irritation. Causes serious eye irritation.
Routes of exposure Skin contact. Eye contact. Inhalation.
Symptoms Prolonged skin contact may cause redness, irritation and dry skin.
Skin corrosion/irritation Causes skin irritation.
Serious eye damage/eye irritation Causes serious eye irritation.
Respiratory sensitizer No data available.
Skin sensitizer May cause an allergic skin reaction.
Germ cell mutagenicity Resins of this type, liquid resins based on BisPhenolA/Epiclorohydrin (Epoxy Resin), have proved to be inactive when tested by in vivo mutagenicity assays.
Carcinogenicity There is no evidence of carcinogenic effects for this product.
Toxic to reproduction No data available.
Specific target organ toxicity - single exposure No data available.
Specific target organ toxicity - repeated exposure No data available.
Aspiration hazard Not classified.
Chronic effects Not available.
Relevant negative data Not available.
Other information Toxicological, ecotoxicological, physical and chemical properties may not have been fully investigated. Hazard data above is estimated based on best available information.
12. ECOLOGICAL INFORMATION

Ecotoxicological data

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test results</th>
</tr>
</thead>
<tbody>
<tr>
<td>BisPhenolA/Epichlorohydrin (Epoxy Resin) (CAS 25068-38-6)</td>
<td>Fish</td>
<td>LC50</td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50</td>
<td>Daphnia magna</td>
</tr>
</tbody>
</table>

Ecotoxicity
Information given is based on data on the components and the ecotoxicology of similar products. Toxic to aquatic life with long lasting effects.

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

Bioaccumulation
No data available.

Partition coefficient
No data available.

n-octanol/water (log Kow)

Bioconcentration factor (BCF) Not available.

Mobility
The product is insoluble in water.

Other hazardous effects
No data available.

13. DISPOSAL CONSIDERATIONS

Disposal methods/information
Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal. Do not discharge into rivers, lakes, mountains, etc. because the product may affect the environment.

Special precautions
Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

International regulations

IATA

UN number | UN3082
Proper shipping name | Environmentally hazardous substance, liquid, n.o.s. (Bisphenol-A Epichlorohydrin resin)
Hazard class | 9
Packing group | III
Labels required | 9
Special transport | Read safety instructions, SDS and emergency procedures before handling.
Precautions and conditions
Environmental hazards | Yes

IMDG

UN number | UN3082
Proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A Epichlorohydrin resin)
Hazard class | 9
Packing group | III
Labels required | 9
EmS | F-A, S-F
Marine pollutant | Yes
Special transport | Read safety instructions, SDS and emergency procedures before handling.
Precautions and conditions
15. REGULATORY INFORMATION

Applicable 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.
Classified as dangerous good according to NZS 5433:1999, UN, IMDG or IATA.

HSNO: 6.3B - Skin corrosion/irritation, 6.4A-Serious eye damage/eye irritation, 6.5B - Skin Sensitization, 9.1B - Aquatic toxicity (Chronic) 2

New Zealand Inventory of Chemicals (NZIoC): Registration status
BisPhenolA/Epichlor hydrin (CAS 25068-38-6) HSNO Approved

16. OTHER INFORMATION

References In house data.
Issued by Not available.
Prepared by Not available.
Disclaimer The information in this (M)SDS was obtained from sources which we believe are reliable but cannot guarantee. Additionally, your use of this information is beyond our control and may be beyond our knowledge. Therefore, the information is provided without any representation or warranty express or implied.

Issue date 27-August-2013
Revision date -
1. PRODUCT AND COMPANY IDENTIFICATION

Product name: CRACK-PAC® Injection Epoxy - Hardener
Product code: Cartridges: ETIPAC10, ETIPAC10KT – ETIPAC10 Hardener
Company name: Simpson Strong-Tie New Zealand
Address: 28 Arrenway Drive
          Albany
          Auckland 0632
          New Zealand
Website: www.strongtie.co.nz
Telephone: +64 9 477 4440
Fax: +64 9 475 9724
Emergency telephone number: 0800 POISON (0800 764 766)
Recommended use and Limitations on use
  Recommended use: Low Viscosity Injection Epoxy

2. HAZARDS IDENTIFICATION

GHS classification
  Not classified.
  Physical hazards
  Health hazards
  Acute toxicity, oral Category 4
  Acute toxicity, dermal Category 4
  Acute toxicity, inhalation Category 2
  Skin corrosion/irritation Category 1B
  Serious eye damage/eye irritation Category 1
  Sensitization, skin Category 1
  Specific target organ toxicity, single exposure Category 1 (Respiratory system)
  Specific target organ toxicity, repeated exposure Category 2 (Liver, Kidney, Lung)
  Environmental hazards
  Hazardous to the aquatic environment, acute hazard Category 3
  Hazardous to the aquatic environment, long-term hazard Category 3

Label elements
  Symbol

Signal word: Danger
Hazard statements:
  Causes severe skin burns and eye damage. Fatal if inhaled. Causes damage to organs (Respiratory system). May cause damage to organs (Liver, Kidney, Lung) through prolonged or repeated exposure. Harmful to aquatic life with long lasting effects.

Precautionary statements
  Prevention
  Wear protective gloves/protective clothing/eye protection/face protection. Contaminated work clothing should not be allowed out of the workplace. Do not breathe vapour. Use only outdoors or in a well-ventilated area. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment.

Response
  IF SWALLOWED: rinse mouth. Do NOT induce vomiting. 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. Wash contaminated clothing before re-use. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTRE or doctor/physician. IF IN EYES: Rinse
CRACK-PAC® *Injection Epoxy* - SAFETY DATA SHEET

cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

### Storage
Store in a well-ventilated place. Keep container tightly closed. Store locked up.

### Disposal
Dispose of contents/container in accordance with local/regional/national/international regulations.

### Other hazards
Causes digestive tract burns. Causes respiratory tract burns.

### COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Substance or mixture</th>
<th>Chemical property</th>
<th>CAS Number</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixture</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,3-Benzenedimethanamine</td>
<td></td>
<td>1477-55-0</td>
<td>70-90</td>
</tr>
<tr>
<td>Diethylenetriamine</td>
<td></td>
<td>111-40-0</td>
<td>10-30</td>
</tr>
</tbody>
</table>

### FIRST AID MEASURES

**Inhalation**
Immediately remove from further exposure. Get immediate medical assistance. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. Give supplemental oxygen, if available. If breathing has stopped, assist ventilation with a mechanical device.

**Skin contact**
Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Chemical burns must be treated by a physician.

**Eye contact**
Flush thoroughly with water for at least 15 minutes. Get immediate medical assistance. If medical assistance is not immediately available, flush an additional 15 minutes. Make sure to remove any contact lenses from the eyes before rinsing.

**Ingestion**
Rinse mouth thoroughly with water and give large amounts of milk or water to people not unconscious. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Obtain medical attention and take along these instructions.

**Potential delayed effects**
May cause damage to mucous membranes in nose, throat, lungs and bronchial system. Cough. Labored breathing. Be aware that symptoms of lung oedema (shortness of breath) may develop up to 24 hours after exposure. Prolonged contact causes serious eye and tissue damage. May cause serious chemical burns to the skin. May cause burns in mucous membranes, throat, oesophagus and stomach.

**Personal protection for first-aid responders**
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

**Notes to physician**
Treat symptomatically.

### FIRE-FIGHTING MEASURES

**Extinguishing media**
The product is non-combustible. Will burn if involved in a fire. Use extinguishing agent suitable for type of surrounding fire.

**Extinguishing media to avoid**
None known.

**HAZCHEM Code Number**
2W

**Specific hazards during firefighting**
During fire, gases hazardous to health may be formed.

**Special fire fighting procedures**
Use standard firefighting procedures and consider the hazards of other involved materials. Prevent runoff from fire control or dilution from entering streams, sewers or drinking water supply.

**Protection of fire-fighters**
Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.

**Hazards from combustion products**
Carbon oxides. Nitrogen Oxides

**Specific methods**
Keep unnecessary personnel away.
6. **ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures**

Wear appropriate personal protective equipment (See Section 8). Stop leak if possible without any risk. Immediately evacuate personnel to safe areas. Provide adequate ventilation.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not allow to enter drains, sewers or watercourses. Contact local authorities in case of spillage to drain/aquatic environment.

**Spill cleanup methods**

Remove sources of ignition. For waste disposal, see Section 13.

- **Small Spills:** Soak up with absorbent material such as clay, sand or other suitable non-reactive material. Place in leak-proof containers. Seal tightly for proper disposal.
- **Large Spills:** Approach suspected leak areas with caution. Evacuate and ventilate the area. Create a dike or trench to contain material. Use self contained breathing apparatus and chemical protective clothing. Soak up with absorbent material such as clay, sand or other suitable non-reactive material. Place in leak-proof containers. Seal tightly for proper disposal.

7. **HANDLING AND STORAGE**

**Handling**

**Precautions**

Mechanical ventilation or local exhaust ventilation is required. Persons susceptible for allergic reactions should not handle this product. Avoid any exposure. Use care in handling/storage. Observe good industrial hygiene practices.

**Safe handling advice**

Wear suitable protective clothing. gloves and eye/face protection.

**Prevention of fire and explosion**

Do not smoke, use open fire or other sources of ignition.

**Storage**

**Suitable storage conditions**

Keep away from heat, sparks and open flame. Store in a cool, dry, well-ventilated place. Protect against physical damage. Keep out of reach of children. Keep away from food, drink and animal feeding stuffs. Separate from acids and oxidizing materials. Store away from incompatible materials.

**Incompatible materials**

Strong oxidising agents. Strong acids.

**Safe packaging materials**

Keep in original container.

8. **EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Workplace exposure limits**

New Zealand. WES. (Workplace Exposure Standards)

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,3-Benzenedimethanamine (CAS 1477-55-0)</td>
<td>Ceiling</td>
<td>0.1 mg/m³</td>
</tr>
<tr>
<td>Diethylenetriamine (CAS 111-40-0)</td>
<td>TWA</td>
<td>4.2 mg/m³</td>
</tr>
</tbody>
</table>

**US. ACGIH Threshold Limit Values**

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,3-Benzenedimethanamine (CAS 1477-55-0)</td>
<td>Ceiling</td>
<td>0.1 mg/m³</td>
</tr>
<tr>
<td>Diethylenetriamine (CAS 111-40-0)</td>
<td>TWA</td>
<td>1 ppm</td>
</tr>
</tbody>
</table>

**UK. EH40 Workplace Exposure Limits (WELs)**

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethylenetriamine (CAS 111-40-0)</td>
<td>TWA</td>
<td>4.3 mg/m³</td>
</tr>
</tbody>
</table>

**Australia. OELs. (Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment)**

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethylenetriamine (CAS 111-40-0)</td>
<td>TWA</td>
<td>4.2 mg/m³</td>
</tr>
</tbody>
</table>

**Exposure guidelines**

The product is corrosive and a strict risk management is to be applied to prevent exposure of industrial or professional workers.
New Zealand WES: Skin designation

- 1,3-Benzenedimethanamine (CAS 1477-55-0) Skin absorption can be significant.
- Diethylenetriamine (CAS 111-40-0) Skin absorption can be significant.

US ACGIH Threshold Limit Values: Skin designation

- 1,3-Benzenedimethanamine (CAS 1477-55-0) Can be absorbed through the skin.
- Diethylenetriamine (CAS 111-40-0) Can be absorbed through the skin.

Engineering controls
Mechanical ventilation or local exhaust ventilation is recommended. Eye wash facilities and emergency shower must be available when handling this product.

Personal protective equipment

Respiratory protection
If workplace exposure limits are exceeded, a respiration protection approved for this particular job must be worn.

Skin protection
Wear appropriate chemical resistant clothing.

Eye/face protection
Wear safety glasses with side shields (or goggles).

Radioactive or thermal hazards
Follow standard monitoring procedures.

Hygiene measures
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

Appearance Clear liquid.

Physical state Liquid.

Colour Clear.

Odour Ammonia.

Odour threshold Not available.

pH 12

Melting point/freezing point Not available.

Boiling point, initial boiling point, and boiling range
Not available.

Flash point 110.0°C (230.0°F) Open cup

Auto-ignition temperature Not available.

Flammability (solid, gas) Not applicable.

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Vapour pressure Not available.

Vapour density Not available.

Evaporation rate Not available.

Relative density Not available.

Density Not available.

Solubility Slightly soluble in water.

Partition coefficient (n-octanol/water) No data available.

Decomposition temperature Not available.
10. STABILITY AND REACTIVITY

| Stability | Material is stable under normal conditions. |
| Conditions to avoid | Excessive heat. Contact with incompatible materials. |
| Incompatible materials | Strong oxidizing agents. Strong acids. |
| Possibility of hazardous reactions | Will not occur. |
| Other information | This product reacts with acids. |

11. TOXICOLOGICAL INFORMATION

| Acute toxicity | Harmful in contact with skin and if swallowed. Fatal if inhaled. |
| Product | Test Results |
| CRACK-PAC Injection Epoxy – Hardener (CAS Mixture) | |
| Acute | |
| Oral | |
| LD50 | Rat | 900 mg/kg |
| Components | Species | Test Results |
| 1,3-Benzenedimethanamine (CAS 1477-55-0) | |
| Acute | |
| Dermal | |
| LD50 | Rabbit | 2000 mg/kg |
| Inhalation | |
| LC50 | Rat | 700 ppm, 1h |
| Oral | |
| LD50 | Rat | 930 mg/kg |
| Routes of exposure | Inhalation. Eyes. Skin. Ingestion. |
| Symptoms | Cough. Labored breathing. Be aware that symptoms of lung oedema (shortness of breath) may develop up to 24 hours after exposure. Prolonged contact causes serious eye and tissue damage. May cause serious chemical burns to the skin. Causes digestive tract burns. May cause burns in mucous membranes, throat, oesophagus and stomach. Causes respiratory tract burns. May cause damage to mucous membranes in nose, throat, lungs and bronchial system. |
| Skin corrosion/irritation | Causes severe skin burns. |
| Serious eye damage/eye irritation | Causes serious eye damage. |
| Skin sensitizer | May cause an allergic skin reaction. |
| Germ cell mutagenicity | No data available. |
| Carcinogenicity | This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. |
| Toxic to reproduction | No data available. |
| Specific target organ toxicity - single exposure | Causes damage to organs (Respiratory system). |
| Specific target organ toxicity - repeated exposure | May cause damage to organs (Liver, Kidney, Lung) through prolonged or repeated exposure. |
| Aspiration hazard | Not classified. |
| Chronic effects | Not available. |
| Relevant negative data | Not available. |
| Other information | Toxicological, ecotoxicological, physical and chemical properties may not have been fully investigated. Hazard data above is estimated based on best available information. |
12. ECOLOGICAL INFORMATION

Ecotoxicological data

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,3-Benzenedimethanamine (CAS 1477-55-0)</td>
<td>Aquatic</td>
<td>EC50</td>
</tr>
<tr>
<td></td>
<td>Crustacea</td>
<td></td>
</tr>
</tbody>
</table>

Ecotoxicity Information given is based on data on the components and the ecotoxicology of similar products. Harmful to aquatic life with long lasting effects.

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

Bioaccumulation No data available.

Partition coefficient n-octanol/water (log Kow) No data available.

Bioconcentration factor (BCF) Not available.

Mobility The product is slightly soluble in water.

Other hazardous effects No data available.

13. DISPOSAL CONSIDERATIONS

Disposal methods/information Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal. Do not discharge into rivers, lakes, mountains, etc. because the product may affect the environment.

Special precautions Dispose of in accordance with local regulations.

14. TRANSPORT INFORMATION

International regulations

IATA

<table>
<thead>
<tr>
<th>UN number</th>
<th>Hazard class</th>
<th>Labels required</th>
<th>Special transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN2735</td>
<td>8</td>
<td>8</td>
<td>Read safety instructions, SDS and emergency procedures before handling.</td>
</tr>
</tbody>
</table>

IMDG

<table>
<thead>
<tr>
<th>UN number</th>
<th>Hazard class</th>
<th>Labels required</th>
<th>Special transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>U2735</td>
<td>8</td>
<td>8</td>
<td>Read safety instructions, SDS and emergency procedures before handling.</td>
</tr>
</tbody>
</table>

15. REGULATORY INFORMATION

Applicable 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.

Classified as dangerous good according to NZS 5433:1999, UN, IMDG or IATA.
CRACK-PAC® Injection Epoxy - SAFETY DATA SHEET

HSNO: 6.1B - Acute toxicity - Skin, 6.1D - Acute toxicity - Oral, 8.2B - Skin corrosion / irritation, 8.3A - Serious eye damage / eye irritation, 6.5B - Skin sensitization, 6.9A - STOT (Single) 1, 6.9B - STOT (Repeated) 2 9.1C - Aquatic toxicity (Chronic), 9.1D - Aquatic toxicity (Acute)

New Zealand Inventory of Chemicals (NZIoC): Registration status

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Registration status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,3-Benzenedimethanamine (CAS 1477-55-0)</td>
<td>May be used as a single component chemical under an appropriate group standard</td>
</tr>
<tr>
<td>Diethylenetriamine (CAS 111-40-0)</td>
<td>HSNO Approved</td>
</tr>
</tbody>
</table>

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>Reference</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>References</td>
<td>In-house data</td>
</tr>
<tr>
<td>Issued by</td>
<td>Not available.</td>
</tr>
<tr>
<td>Prepared by</td>
<td>Not available.</td>
</tr>
<tr>
<td>Disclaimer</td>
<td>The information in this (M)SDS was obtained from sources which we believe are reliable but cannot guarantee. Additionally, your use of this information is beyond our control and may be beyond our knowledge. Therefore, the information is provided without any representation or warranty express or implied.</td>
</tr>
<tr>
<td>Issue date</td>
<td>27-August-2013</td>
</tr>
<tr>
<td>Revision date</td>
<td>-</td>
</tr>
</tbody>
</table>