Product Name: RIDGID Pipe Patch Resin

SAFETY DATA SHEET

Section 1 – Product & Company Identification

Product Name: RIDGID PIPE PATCH RESIN

Product Catalog No.: 74863 74878

Product Model: Pipe Patch Resin Only, Two Bottles (3’)
Pipe Patch Resin Only, Two Bottles (32”)

Product Specifications: This product is a Two-Component Organic Silicate Mineral. It has a set of two containers, one marked “Part A” and one marked “Part B”. The Part A and Part B are used together. All of the Part A is poured in Part B and vigorously shaken and the resin mix is used to wet out the patch. The Safety Data Sheet (SDS) contains SDS for both Part A and Part B. Please do not separate the component documents from this cover page. Use the chart to determine the appropriate Part of SDS.

<table>
<thead>
<tr>
<th>Resin Part</th>
<th>SDS</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part A</td>
<td>Part A</td>
<td>3-14</td>
</tr>
<tr>
<td>Part B</td>
<td>Part B</td>
<td>15-31</td>
</tr>
</tbody>
</table>

Recommended Use: For use with RIDGID Pipe Patch

Restrictions on Use: Industrial use only
Product Name: RIDGID Pipe Patch Resin

Company Information:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>North America</strong></td>
<td></td>
</tr>
<tr>
<td>Ridge Tool Company</td>
<td>400 Clark Street</td>
</tr>
<tr>
<td></td>
<td>Elyria, Ohio 44035-6001</td>
</tr>
<tr>
<td></td>
<td>1-800-519-3456</td>
</tr>
<tr>
<td>(8:00 am – 5:00 pm EST, M-F)</td>
<td></td>
</tr>
<tr>
<td>Emergency Telephone</td>
<td>call 9-1-1 or local emergency number</td>
</tr>
<tr>
<td><a href="http://www.RIDGID.com">www.RIDGID.com</a></td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td></td>
</tr>
<tr>
<td>Ridge Tool Australia</td>
<td>127 Metrolink Circuit</td>
</tr>
<tr>
<td>Campbellfield, VIC 3061</td>
<td>1-800-743-443</td>
</tr>
<tr>
<td>(8:30 am – 5:00 pm AEST, M-F)</td>
<td>Emergency Telephone</td>
</tr>
<tr>
<td>call 000 or local emergency number</td>
<td><a href="http://www.RIDGID.com.au">www.RIDGID.com.au</a></td>
</tr>
</tbody>
</table>

|                |                |
| **Europe**     |                |
| Ridge Tool NV  | Schurhovenveld 4820 |
| 3800 Sint-Truiden, Belgium | +32 (0) 11 598 600 |
| (8:00 am – 5:00 pm, M-F) | Emergency Telephone |
| call +32 (0) 11 598 600 or local emergency number | www.RIDGID.eu |

Issue Date: June 27, 2022

Revision: A
**Product Name:** RIDGID Pipe Patch Resin Part A

---

**Section 1A – Product Identification**

Product Name:
RIDGID Pipe Patch Resin Part A

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**Section 2A – Hazards Identification**

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid, Clear, colorless to slightly yellow</td>
</tr>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
</tbody>
</table>

**Classification**

<table>
<thead>
<tr>
<th>Condition</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion/irritation</td>
<td>Category 1</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 1</td>
</tr>
</tbody>
</table>

**Signal Word**

Danger

**Hazard statements**

Causes severe skin burns and eye damage

---

**Precautionary Statements - Prevention**

Do not breathe dusts or mists

Wash face, hands and any exposed skin thoroughly after handling

Wear protective gloves/protective clothing/eye protection/face protection
Precautionary Statements - Response

Immediately call a POISON CENTER or doctor

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER or doctor

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

Wash contaminated clothing before reuse

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Immediately call a POISON CENTER or doctor

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Silicate</td>
<td>1344-09-8</td>
<td>25-50</td>
</tr>
</tbody>
</table>

**If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.**
Section 4A – First Aid Measures

Description of first aid measures

General Advice
Immediately call a poison center or doctor/physician.

Eye Contact
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor/physician.

Skin Contact
Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.

Inhalation
Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center or doctor/physician.

Ingestion
Rinse mouth. Do NOT induce vomiting.

Most important symptoms and effects, both acute and delayed

Symptoms
Causes severe skin burns and eye damage.

Indication of any immediate medical attention and special treatment needed

Notes to Physician
Treat symptomatically.
Section 5A – Fire Fighting Measures

Suitable Extinguishing Media

The product itself is non-combustible. Adapt fire extinguishing measures to surrounding areas. Water spray, carbon dioxide, dry chemical extinguishing agent (powder), foam.

Unsuitable Extinguishing Media

Water with a full water jet.

Specific Hazards Arising from the Chemical

Fire in vicinity poses risk of pressure build-up and burst. Containers at risk from fire should be cooled with water spray. Fire residues and contaminated extinguishing water should be disposed of in accordance with local authority regulations. Carbon dioxide should be applied carefully in confined spaces since it can displace oxygen.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6A – Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personal Precautions

Use personal protective clothing. Avoid contact with skin, eyes, and clothing. High risk of slipping due to leakage/spillage of product.

Environmental precautions

Environmental precautions

Do not allow to enter drains or waterways. Prevent spread over a wide area (e.g. by containment or oil
Methods and material for containment and cleaning up

Methods for Containment  Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up  Take up with absorbent material (e.g. sand, kieselguhr, universal binder). Rinse away rest with plenty of water. Dispose according to authority regulations.

Section 7A – Handling And Storage

Precautions for safe handling

Advice on Safe Handling  Do not breathe dusts or mists. Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing and eye/face protection.

Conditions for safe storage, including any incompatibilities

Storage Conditions  Store locked up.


Section 8A – Exposure Controls / Personal Protection

Exposure Guidelines  This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Appropriate engineering controls

Individual protection measures, such as personal protective equipment

Eye/Face Protection
Safety glasses with side protection.

Skin and Body Protection
Tested protective gloves must be worn. Suitable material: NBR (nitrile rubber), butyl rubber. Clothing as usual in the chemical industry.

Respiratory Protection
Usually, no personal respiratory protection is needed. It is only required when the exposure limit value is exceeded, or in the event of aerosol/mist formation. Suitable respiratory protection.

General Hygiene Considerations
Observe the usual precautions when handling chemicals. Avoid contact with skin and eyes. Do not breathe aerosol. Do not eat, drink or smoke during working time. Take off immediately all contaminated clothing and wash before reuse. Hands and/or face should be washed before breaks and at the end of the shift. Take a shower, if necessary. Apply skin care products after work.

Section 9A – Physical And Chemical Properties

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Liquid, Clear, colorless to slightly yellow</td>
</tr>
<tr>
<td>Color</td>
<td>Colorless to slightly yellow</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not determined</td>
</tr>
<tr>
<td>pH</td>
<td>13-14</td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>Not determined</td>
</tr>
<tr>
<td>Property</td>
<td>Value</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>&gt;100 °C / &gt;212 °F</td>
</tr>
<tr>
<td>Flash point</td>
<td>Does not ignite</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flammability (Solid, Gas)</td>
<td>Liquid-Not applicable</td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td></td>
</tr>
<tr>
<td>Upper flammability or explosive limits</td>
<td>Not determined</td>
</tr>
<tr>
<td>Lower flammability or explosive limits</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not determined</td>
</tr>
<tr>
<td>Relative Density</td>
<td>1.5 +/- 0.1 g/cm³ (25DEGC/77DEGF)</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Completely miscible</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>Not determined</td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>Not determined</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>Not determined</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not determined</td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>Not determined</td>
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<tr>
<td>Dynamic Viscosity</td>
<td>400 +/- 50 mPas (25DEGC/77DEGF)</td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>Not determined</td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>Not determined</td>
</tr>
</tbody>
</table>
Section 10A – Stability And Reactivity

Reactivity
Not reactive under normal conditions.

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
None under normal processing.

Conditions to Avoid
Protect from frost.

Incompatible materials
Acids. Reacts with metals like aluminum, tin, zinc under evolution of hydrogen and heat.

Hazardous decomposition products
None known based on information supplied.

Section 11A – Toxicological Information

Information on likely routes of exposure

Product Information
Eye Contact Avoid contact with eyes.
Skin Contact Avoid contact with skin.
Inhalation Do not inhale.
Ingestion Do not ingest.

Component Information

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Silicate 1344-09-8</td>
<td>= 1960 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
Symptoms related to the physical, chemical and toxicological characteristics

Symptoms

Please see section 4 of this SDS for symptoms

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation
Causes severe skin burns.

Serious eye damage/eye irritation
Causes severe eye damage.

Carcinogenicity
Based on the information provided, this product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

Oral LD50
5,226.666 mg/kg

Section 12A – Ecological Information

Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Component Information

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Silicate 1344-09-8</td>
<td></td>
<td>301 - 478: 96 h Lepomis macrochirus mg/L LC50 3185: 96 h Brachydanio rerio mg/L LC50 semi-static</td>
<td></td>
</tr>
</tbody>
</table>
Persistence/Degradability: Not determined.

Bioaccumulation: There is no data for this product.

Mobility: Not determined

Other Adverse Effects: Not determined.

Section 13A – Disposal Consideration

Waste Treatment Methods

Disposal of Wastes: Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging: Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14A – Transportation Information

Note: Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT: Not regulated

IATA: Not regulated
Product Name: RIDGID Pipe Patch Resin

IMDG
Not regulated

Section 15A – Regulatory Information

International Inventories

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>TSCA</th>
<th>TSCA Inventory Status</th>
<th>DSL/NDSL</th>
<th>EINECS/ELINCS</th>
<th>ENCS</th>
<th>IECSC</th>
<th>KECL</th>
<th>PICCS</th>
<th>AICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Silicate</td>
<td>X</td>
<td>ACTIVE</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Legend:

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

US Federal Regulations

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).
SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated under applicable state right-to-know regulations
Section 1B – Product Identification

Product Name:
RIDGID Pipe Patch Resin Part B

Section 2B – Hazards Identification

**Appearance**
Dark brown liquid

**Physical state**
Liquid

**Odor**
Damp

**Classification**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - Oral</td>
<td>Category 4</td>
</tr>
<tr>
<td>Acute toxicity - Inhalation (Dusts/Mists)</td>
<td>Category 4</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Respiratory sensitization</td>
<td>Category 1</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>Category 1</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Category 2</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Category 3</td>
</tr>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
<td>Category 2</td>
</tr>
</tbody>
</table>
Signal Word

Danger

Hazard statements

Harmful if swallowed
Harmful if inhaled
Causes skin irritation
Causes serious eye irritation
May cause allergy or asthma symptoms or breathing difficulties if inhaled
May cause an allergic skin reaction
Suspected of causing cancer
May cause respiratory irritation
May cause damage to organs through prolonged or repeated exposure

Precautionary Statements

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Use only outdoors or in a well-ventilated area
In case of inadequate ventilation wear respiratory protection
Contaminated work clothing must not be allowed out of the workplace
Wear protective gloves
Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

If exposed or concerned: Get medical advice/attention

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

IF ON SKIN: Wash with plenty of water and soap
Take off contaminated clothing and wash before reuse
If skin irritation or rash occurs: Get medical advice/attention

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Precautionary Statements - Storage

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

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant.
Section 3B – Composition / Information On Ingredients

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No</th>
<th>Weight-%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene diphenyl diisocyanate isomers (Polymeric MDI)</td>
<td>9016-87-9</td>
<td>55-60</td>
</tr>
<tr>
<td>Tris (1-chloro-2-propyl) phosphate</td>
<td>13674-84-5</td>
<td>5-10</td>
</tr>
</tbody>
</table>

**If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.**

Section 4B – First Aid Measures

**Description of first aid measures**

**General Advice**
If exposed or concerned: Get medical advice/attention.

**Eye Contact**
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.

**Skin Contact**
Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention.

**Inhalation**
Remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call Poison Control or doctor/physician.

**Ingestion**
Call a poison center or doctor/physician if you feel unwell. Rinse mouth.
Most important symptoms and effects, both acute and delayed

**Symptoms**

Harmful if swallowed. Harmful if inhaled. Causes skin irritation. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. Suspected of causing cancer. May cause respiratory irritation. May cause damage to organs through prolonged or repeated exposure.

Indication of any immediate medical attention and special treatment needed

**Notes to Physician**

Treat symptomatically.

__________________________ Section 5B – Fire Fighting Measures __________________________

**Suitable Extinguishing Media**

Foam, CO2 or dry powder. Water spray may be used if no other available and then in copious quantities.

**Unsuitable Extinguishing Media**

High volume water jet.

**Specific Hazards Arising from the Chemical**

In the event of fire and/or explosion do not breathe fumes. Fire in vicinity poses risk of pressure build-up and rupture. Containers at risk from fire should be cooled with water and, if possible, removed from the danger area. Due to reaction with water producing CO2 gas, a hazardous build-up of pressure could result if contaminated containers are re-sealed. Containers may burst if overheated. Do not allow contaminated
extinguishing water to enter the soil, groundwater or surface waters.

Hazardous combustion products

Carbon dioxide, carbon monoxide, hydrogen cyanide, nitrogen oxides, isocyanate vapors. The substances/groups of substances mentioned can be released in case of fire.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6B – Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personal Precautions

Immediately contact emergency personnel. Evacuate the area. Keep upwind to avoid inhalation of vapors. Clean-up should only be performed by trained personnel. Keep unauthorized persons away. Remove not affected people. Inform the relevant emergency services and authorities.

For Emergency Responders

People dealing with major spillages should wear full protective clothing including respiratory protection. Use suitable protective equipment.

Environmental precautions

Environmental precautions

Do not allow contaminated extinguishing water to enter the soil, groundwater or surface waters. Avoid dispersal of spilt material and runoff and contact with drains and sewers. See Section 12 for additional Ecological Information.
Methods and material for containment and cleaning up

Methods for Containment
Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up
Absorb spillages onto sand, earth or any suitable adsorbent material. Leave to react for at least 30 minutes. Do not absorb onto sawdust or other combustible materials. Contaminated adsorbent material shall be disposed according to Section 13. Wash the spillage area with water.

Precautions for safe handling

Advice on Safe Handling
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. In case of inadequate ventilation wear respiratory protection. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves. Do not breathe dust/fume/gas/mist/vapors/spray.

Conditions for safe storage, including any

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

Incompatible Materials
Water, acids, alkalis, alcohols, amines.
Section 8B – Exposure Controls / Personal Protection

Exposure Guidelines

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering Controls

Showers. Eyewash stations. Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/Face Protection
Safety glasses with side-shields (frame goggles).

Skin and Body Protection
Safety shoes and closed workwear. Chemical resistant protective gloves.

Respiratory Protection
Respiratory protection in case of vapor/aerosol release. Combination filter for organic, inorganic, acid inorganic, and basic gases/vapors.

General Considerations

Do not breathe vapor/spray. With products freshly manufactured from isocyanates body protection and chemical resistant protective gloves is recommended. Wearing of closed workwear is required additionally to the personal protective equipment. No eating, drinking, smoking or tobacco use at the place of work. Take off immediately all contaminated clothing. Hands and/or face should be washed before breaks and at the end of the shift. After work the skin should be cleaned, and skin-care agents applied.
# Section 9B – Physical And Chemical Properties

## Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Dark brown liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Dark brown</td>
</tr>
<tr>
<td>Odor</td>
<td>Damp</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Property</strong></td>
<td><strong>Values</strong></td>
</tr>
<tr>
<td>pH</td>
<td>Not determined</td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>Not determined</td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>&gt;200 °C / &gt;392 °F</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt;200 °C / &gt;392 °F</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flammability (Solid, Gas)</td>
<td>Liquid-Not applicable</td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td></td>
</tr>
<tr>
<td>Upper flammability or explosive limits</td>
<td>Not determined</td>
</tr>
<tr>
<td>Lower flammability or explosive limits</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>&lt;0.00001 mbar (20DEGC/68DEGF)</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>Not determined</td>
</tr>
<tr>
<td>Relative Density</td>
<td>1.24 +/- 0.02 g/cm³ (25DEGC/77DEGF)</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>Reacts with water with slow CO2 appearance at the border area into non-soluble, high melting point or not melting polyurea</td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>Not determined</td>
</tr>
<tr>
<td>Partition Coefficient</td>
<td>Not determined</td>
</tr>
</tbody>
</table>
Product Name: RIDGID Pipe Patch Resin

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autoignition temperature</td>
<td>Not determined</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not determined</td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>Not determined</td>
</tr>
<tr>
<td>Dynamic Viscosity</td>
<td>190-250 mPas (25DEGC/77DEGF)</td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>Not determined</td>
</tr>
<tr>
<td>Oxidizing Properties</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

Section 10B – Stability And Reactivity

Reactivity

Reacts with water, acids, alcohols, amines, bases, and oxidants.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Reaction is slow with cold or warm water (< 50 °C), with hot water or steam the reaction is faster, producing carbon dioxide causing pressure increase. Acids, alcohols, amines, bases, and oxidants may cause fire and explosion hazard.

Conditions to Avoid

High temperature, moisture, strong light.

Incompatible materials

Water, acids, alkalis, alcohols, amines.

Hazardous decomposition products

None known based on information supplied.
Section 11B – Toxicological Information

Information on likely routes of exposure

Product Information

Eye Contact
Avoid contact with eyes.

Skin Contact
Avoid contact with skin.

Inhalation
Harmful if inhaled.

Ingestion
Harmful if swallowed.

Component Information

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene diisocyanate isomers (Polymeric MDI) 9016-87-9</td>
<td>= 49 g/kg (Rat)</td>
<td>&gt; 9.4 g/kg (Rabbit)</td>
<td>= 490 mg/m³ (Rat) 4 h</td>
</tr>
<tr>
<td>Tris (1-chloro-2-propyl) phosphate 13674-84-5</td>
<td>= 1500 mg/kg (Rat)</td>
<td>&gt; 5000 mg/kg (Rabbit)</td>
<td>&gt; 5.05 mg/L (Rat) 4 h</td>
</tr>
</tbody>
</table>

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms
Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation
Causes skin irritation.

Serious eye damage/eye irritation
Causes serious eye irritation.

Sensitization
May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

Carcinogenicity
Suspected of causing cancer.
Product Name: RIDGID Pipe Patch Resin

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyleneatediphenyl diisocyanate isomers (Polymeric MDI) 9016-87-9</td>
<td></td>
<td>Group 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Legend:**

*IARC* - International Agency for Research on Cancer

Group 3 IARC components are "not classifiable as human carcinogens"

**STOT - single exposure**
May cause respiratory irritation.

**STOT - repeated exposure**
May cause damage to organs through prolonged or repeated exposure.

**Numerical measures of toxicity**

The following values are calculated based on chapter 3.1 of the GHS document

- **Oral LD50**: 2,000 mg/kg
- **Dermal LD50**: 11,940.90 mg/kg
- **ATEmix (inhalation-dust/mist)**: 5.0 mg/L

**Ecotoxicity**

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Component Information

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tris (1-chloro-2-propyl) phosphate 13674-84-5</td>
<td>4: 96 h Pseudokirchneriella subcapitata mg/L EC50</td>
<td>30: 96 h Poecilia reticulata mg/L LC50 static</td>
<td>63: 48 h Daphnia magna mg/L EC50</td>
</tr>
<tr>
<td></td>
<td>45: 72 h Desmodesmus subspicatus mg/L EC50</td>
<td>56.2: 96 h Brachydanio rerio mg/L LC50 static</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>98: 96 h Pimephales promelas mg/L LC50 static</td>
<td></td>
</tr>
</tbody>
</table>

Persistence/Degradability  Not determined.

Bioaccumulation  There is no data for this product.

Mobility

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Partition coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tris (1-chloro-2-propyl) phosphate 13674-84-5</td>
<td>2.59</td>
</tr>
</tbody>
</table>

Other Adverse Effects  Not determined
Section 13B – Disposal Consideration

Waste Treatment Methods

Disposal of Wastes
Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging
Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14B – Transportation Information

Note
Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT
Not regulated

IATA
Not regulated

IMDG
Not regulated

Section 15B – Regulatory Information

International Inventories

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>TSCA Inventory Status</th>
<th>DSL/NDSL</th>
<th>EINECS/ELINCS</th>
<th>ENCS</th>
<th>IECSC</th>
<th>KECL</th>
<th>PICCS</th>
<th>AICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylenediphenyl diisocyanate isomers</td>
<td>X</td>
<td>ACTIVE</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Rev. A
<table>
<thead>
<tr>
<th>(Polymeric MDI)</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tris (1-chloro-2-propyl) phosphate</td>
<td>X</td>
<td>ACTIVE</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>4,4'-Methylenediphenyl diisocyanate, oligomeric reaction products with 2,4'-diisocyanatodiphenylmethane, 2,2'-methylenediphenyl diisocyanate and α-hydro-ω-hydroxy poly [oxy(methyl-1,2-ethanediyl)]</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

**Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

**ENCS** - Japan Existing and New Chemical Substances

**IECSC** - China Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**AICS** - Australian Inventory of Chemical Substances
US Federal Regulations

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

SARA 313

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No</th>
<th>Weight-%</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylenediphenyl diisocyanate isomers (Polymeric MDI) - 9016-87-9</td>
<td>9016-87-9</td>
<td>55-60</td>
<td>1.0</td>
</tr>
</tbody>
</table>

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.
U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene diphenyl diisocyanate isomers (Polymeric MDI)</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9016-87-9</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Section 16 – Other Information

Prepared by: ............... Ridge Tool Company
Operating Standard. ...... 6-429, Rev. A
Engineering Change. ...... ECN001483
Issue Date: ...............June 27, 2022
Last Revision Date: ....... NA

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Product Name: RIDGID Pipe Patch Resin

<table>
<thead>
<tr>
<th>NFPA</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Hazards</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flammability</td>
<td>Not determined</td>
</tr>
<tr>
<td>Instability</td>
<td>Not determined</td>
</tr>
<tr>
<td>Special Hazards</td>
<td>Not determined</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Hazards</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flammability</td>
<td>Not determined</td>
</tr>
<tr>
<td>Physical hazards</td>
<td>Not determined</td>
</tr>
<tr>
<td>Personal Protection</td>
<td>Not determined</td>
</tr>
</tbody>
</table>