SAFETY DATA SHEET

Revision Date: 4/14/2015
SDS Type: Pumpable

Section 1 – Identification

Product Name: 310

Product Description: Heat Conductive Thermomastic

Recommended Use: Non-drying, pumpable mastic used as an efficient, heat transfer material.

Manufacturer: deVan Sealants, Inc.
6301 Prescott Avenue
P.O. Box 470375
St. Louis, Missouri 63147
USA

Phone: +1 314-383-1941
Fax: +1 314-383-6491

24-hour Emergency Contact: ChemTel
USA: 800-255-3924
International: +01 813-248-0585

Section 2 – Hazard Identification

GHS Classification:
- Skin irritation: Category 3
- Eye irritation: Category 2B
- Skin sensitizer: Category 1
- Carcinogenicity: Category 1A
- Reproductive toxicity: Category 1B

GHS Label Element:

Signal Word: Danger

Hazard Statements:
- H316 Causes mild skin irritation
- H317 May cause an allergic skin reaction
- H320 Causes eye irritation
- H350 May cause cancer (inhalation)
- H360 May damage fertility or the unborn child

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Precautionary Statements:

Prevention:
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust and fumes.
P264 Wash hands and skin contact areas thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves, clothing and eye protection.

Response:
P302 + P313 + P333 + P352 + P362 + P364 IF ON SKIN: Get medical advice. If skin irritation or rash occurs: Get medical attention. Wash with plenty of soap and water. Difficult to remove material may require the use of mineral spirits to remove residue. Take off contaminated clothing and wash it before reuse.
P304 + P311 + P340 IF INHALED: Call a doctor. Remove person to fresh air and keep comfortable for breathing.
P305 + P313 + P337 + P338 + P351 IF IN EYES: Get medical advice. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
P308 + P313 If exposed or concerned: Get medical advice.
P314 Get medical attention if you feel unwell.

Storage:
P405 Store locked up.

Disposal
P501 Dispose of contents in accordance with local/regional/national regulations (see Section 13 for specifics).

Other Hazards:
None known.

Section 3 – Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone</td>
<td>1317-65-3</td>
<td>70-80%</td>
</tr>
<tr>
<td>Solvent-dewaxed heavy paraffinic distillates</td>
<td>64742-65-0</td>
<td>1-10%</td>
</tr>
<tr>
<td>Heavy hydrotreated paraffin distillates</td>
<td>64742-54-7</td>
<td>1-10%</td>
</tr>
<tr>
<td>Hydrous aluminum silicate</td>
<td>1332-58-7</td>
<td>1-10%</td>
</tr>
<tr>
<td>Hydrated aluminum magnesium silicate</td>
<td>8031-18-3</td>
<td>1-10%</td>
</tr>
<tr>
<td>Crystalline silica (impurity)</td>
<td>14808-60-7</td>
<td>&lt;0.6%</td>
</tr>
<tr>
<td>Imidazoline derivative</td>
<td>21652-27-7</td>
<td>&lt;0.3%</td>
</tr>
</tbody>
</table>
Section 4 – First Aid Measures

Eye: Flush with water for 15-minutes. Seek medical attention if irritation occurs.

Skin: Remove from skin and wash with soap and water. Difficult to remove material may require the use of mineral spirits to remove residue. Get medical attention if irritation develops.

Inhalation: If affected, remove to fresh air. Seek medical attention if conditions persist.

Ingestion: Do not induce vomiting. Get medical attention immediately.

Most important symptoms and effects, acute and delayed: May cause eye and skin irritation. May cause damage to skin through prolonged or repeated exposure.

Physicians: Treat according to the patient’s condition and specifics of exposure.

Section 5 – Fire Fighting Measures

Suitable Extinguishing Media: For small fires use carbon dioxide (CO₂), dry chemical or water spray. For large scale fires, use dry chemical, foam or water spray.

Hazardous combustion products: Carbon monoxide, carbon dioxide, isobutene and other combustion products are possible.

Protective equipment and precautions: Self-contained breathing apparatus and protective clothing should be worn in fighting large fires. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep exposed containers cool.

Section 6 – Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.

Environmental precautions: Prevent further spillage if safe to do so. Keep from discharging into the environment.

Containment / Clean-up: Dike with absorbent material. Wipe or scrape up and contain for salvage or disposal. Dispose of according to state and local laws.
Section 7 – Handling and Storage

Handling: Wash hands or exposed areas thoroughly after handling and prior to eating, drinking or smoking. Use personal protective equipment.

Storage: Normal warehouse conditions are acceptable. Keep away from heat conditions in excess of 120°F. Keep containers dry.

Section 8 – Exposure Controls / Personal Protection

Exposure Guidelines:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limestone</td>
<td>1317-65-3</td>
<td>ACGIH</td>
<td>10 mg/m³ total dust</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3 mg/m³ respirable fraction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA PEL</td>
<td>15 mg/m³ total dust</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5 mg/m³ respirable fraction</td>
</tr>
<tr>
<td>Solvent-dewaxed heavy paraffinic distillates</td>
<td>64742-65-0</td>
<td>ACGIH TWA</td>
<td>5 mg/m³ respirable fraction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA PEL</td>
<td>5 mg/m³ mist</td>
</tr>
<tr>
<td>Heavy hydrotreated paraffin distillates</td>
<td>64742-54-7</td>
<td>ACGIH TWA</td>
<td>No established limits</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA PEL</td>
<td>No established limits</td>
</tr>
<tr>
<td>Hydrous aluminum silicate</td>
<td>1332-58-7</td>
<td>OSHA PEL</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td>Hydrated aluminum magnesium silicate</td>
<td>8031-18-3</td>
<td>ACGIH</td>
<td>10 mg/m³ total dust</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3 mg/m³ respirable fraction</td>
</tr>
<tr>
<td>Crystalline silica (impurity)</td>
<td>14808-60-7</td>
<td>ACGIH TLV</td>
<td>0.05 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA PEL</td>
<td>0.1 mg/m³</td>
</tr>
<tr>
<td>Imidazoline derivative</td>
<td>21652-27-7</td>
<td>ACGIH</td>
<td>No established limits</td>
</tr>
<tr>
<td></td>
<td></td>
<td>OSHA</td>
<td>No established limits</td>
</tr>
</tbody>
</table>

Engineering Controls: Local and general ventilation are recommended to keep solvent vapors from building up while the product is drying.

Personal Protective Equipment:

Eye protection: Safety glasses recommended.

Skin and body protection: Gloves recommended to reduce exposure. Suitable gloves include cotton, leather, nitrile rubber, natural rubber or neoprene rubber. Wear appropriate clothing such as long sleeves and pants to reduce exposure.

Respiratory protection: Where concentrations are above recommended limits as determined by air sampling or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators.
### Section 9 – Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Tan colored paste.</td>
</tr>
<tr>
<td>Odor</td>
<td>Hydrocarbon when wet, none when dry.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not determined</td>
</tr>
<tr>
<td>pH</td>
<td>Not determined</td>
</tr>
<tr>
<td>Freezing/melting point</td>
<td>Not determined</td>
</tr>
<tr>
<td>Boiling point and range</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt;76.7°C (170°F)</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flammability</td>
<td>Not determined</td>
</tr>
<tr>
<td>Lower / Upper flammability</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapor pressure @ 25°C</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not determined</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>1.86 g/cm³</td>
</tr>
<tr>
<td>Solubility</td>
<td>Not determined</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>Not determined</td>
</tr>
<tr>
<td>(n-octanol/water:)</td>
<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>Not determined</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not determined</td>
</tr>
<tr>
<td>Viscosity</td>
<td>350,000 to 400,000 cps</td>
</tr>
</tbody>
</table>

### Section 10 – Stability and Reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
<td>Not reactive</td>
</tr>
<tr>
<td>Chemical stability</td>
<td>Stable</td>
</tr>
<tr>
<td>Hazardous reaction possibility</td>
<td>Hazardous reactions or polymerization will not occur.</td>
</tr>
<tr>
<td>Conditions to Avoid</td>
<td>Avoid heat, sparks, open flames and other ignition sources.</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>Avoid contact with strong oxidizers.</td>
</tr>
</tbody>
</table>
Hazardous decomposition products: Carbon monoxide, carbon dioxide, isobutene and other combustion products are possible.

**Section 11 – Toxicological Information**

Likely routes of exposure: Skin contact
Eye contact
Ingestion

**Acute toxicity:**

<table>
<thead>
<tr>
<th>Product (mixture calculation method)</th>
<th>Oral: ( \text{LD}_{50} )</th>
<th>Dermal: ( \text{LD}_{50} )</th>
<th>Inhalation: ( \text{LD}_{50} )</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Limestone</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral:</td>
<td>( \text{LD}_{50} ) &gt;6000 mg/kg</td>
<td>( \text{LD}_{50} ) 9800 mg/kg</td>
<td>( \text{LD}_{50} ) 17.3 mg/L</td>
</tr>
<tr>
<td>Dermal:</td>
<td>( \text{LD}_{50} ) No data</td>
<td>( \text{LD}_{50} ) No data</td>
<td>( \text{LD}_{50} ) No data</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Oral: ( \text{LD}_{50} )</th>
<th>Dermal: ( \text{LD}_{50} )</th>
<th>Inhalation: ( \text{LD}_{50} )</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Solvent-dewaxed heavy paraffinic distillates</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral:</td>
<td>( \text{LD}_{50} ) No data</td>
<td>( \text{LD}_{50} ) No data</td>
<td>( \text{LD}_{50} ) No data</td>
</tr>
<tr>
<td>Dermal:</td>
<td>( \text{LD}_{50} ) No data</td>
<td>( \text{LD}_{50} ) No data</td>
<td>( \text{LD}_{50} ) No data</td>
</tr>
</tbody>
</table>

| **Heavy hydrotreated paraffin distillates** |                  |                 |                 |
| Oral:                              | \( \text{LD}_{50} \) No data | \( \text{LD}_{50} \) No data | \( \text{LD}_{50} \) No data |
| Dermal:                            | \( \text{LD}_{50} \) No data | \( \text{LD}_{50} \) No data | \( \text{LD}_{50} \) No data |

| **Hydrous aluminum silicate** |                  |                 |                 |
| Oral:                              | \( \text{LD}_{50} \) No data | \( \text{LD}_{50} \) No data | \( \text{LD}_{50} \) No data |
| Dermal:                            | \( \text{LD}_{50} \) No data | \( \text{LD}_{50} \) No data | \( \text{LD}_{50} \) No data |

| **Hydrated aluminum magnesium silicate** |                  |                 |                 |
| Oral:                              | \( \text{LD}_{50} \) No data | \( \text{LD}_{50} \) No data | \( \text{LD}_{50} \) No data |
| Dermal:                            | \( \text{LD}_{50} \) No data | \( \text{LD}_{50} \) No data | \( \text{LD}_{50} \) No data |

| **Crystalline silica (impurity)** |                  |                 |                 |
| Oral:                              | \( \text{LD}_{50} \) 500 mg/kg | \( \text{LD}_{50} \) No data | \( \text{LD}_{50} \) No data |
| Dermal:                            | \( \text{LD}_{50} \) No data | \( \text{LD}_{50} \) No data | \( \text{LD}_{50} \) No data |

| **Imidazoline derivative** |                  |                 |                 |
| Oral:                              | \( \text{LD}_{50} \) 3160 mg/kg | \( \text{LD}_{50} \) No data | \( \text{LD}_{50} \) No data |
| Dermal:                            | \( \text{LD}_{50} \) No data | \( \text{LD}_{50} \) No data | \( \text{LD}_{50} \) No data |
Skin corrosion / irritation:  

**Product**  
No data available  

**Ingredients**  
Solvent-dewaxed heavy paraffinic distillates  
Causes mild skin irritation.  

Heavy hydrotreated paraffin distillates  
Causes mild skin irritation.  

Hydrated aluminum magnesium silicate  
Causes mild skin irritation.

Eye damage / irritation:  

**Product**  
No data available  

**Ingredients**  
Solvent-dewaxed heavy paraffinic distillates  
Causes eye irritation.  

Heavy hydrotreated paraffin distillates  
Causes eye irritation.  

Hydrous aluminum silicate  
Causes eye irritation.  

Hydrated aluminum magnesium silicate  
Causes eye irritation.

Respiratory / skin sensitization:  

**Product**  
No data available  

**Ingredients**  
Imidazoline derivative  
May cause an allergic skin reaction.

Mutagenicity:  
Not classified based on available information.

Carcinogenicity:  

**Product**  
No data available  

**Ingredients**  
Crystalline silica (impurity)  
This product contains >0.1% crystalline silica which is listed as a Group 1 carcinogen by IARC, a known carcinogen by NTP and OSHA and as A2 suspected human carcinogen by ACGIH.

Reproductive toxicity:  

**Product**  
No data available.
Ingredients
Imidazoline derivative
May damage fertility or the unborn child in high doses.

STOT – single exposure: Not classified based on available information.
STOT – repeated exposure: Not classified based on available information.
Aspiration hazard: Not classified based on available information.

Section 12 – Ecological Information
Ecotoxicity: No data available.
Persistence and degradability: No data available.
Bioaccumulative potential: No data available.
Mobility in soil: No data available.
Other adverse effects: This product does not contain any of the controlled substances listed in the Annexes to the Montreal Protocol at concentrations of ≥ 0.1%.

Section 13 – Disposal Considerations
Disposal methods: This product has been evaluated for RCRA hazard class (40 CFR 261) characteristics and does not meet the criteria of hazardous waste if discarded in its purchased form. Do not dispose material into any storm water or sewage system. State or local laws may impose additional regulatory requirements regarding disposal.
Packaging disposal: Packaging contaminated with sealant should be disposed of in accordance with local regulations. Clean, empty packaging should be taken to an approved waste handling site for recycling or disposal.

Section 14 – Transport Information
DOT (49 CFR 172.101): Not subject to DOT regulations.
UN number: Not regulated as a dangerous good.
UN proper shipping name: Not regulated as a dangerous good.
Hazard class: Not applicable.
Packing group: Not applicable.
Marine pollutant: No.
Transport in bulk: Not applicable for product as supplied, according to Annex II of MARPOL 73/78 and the IBC Code.

Ocean Shipment (IMDG): Not subject to IMDG code.

Air shipment (IATA): Not subject to IATA regulations.

Special precautions: Not applicable.

Section 15 – Regulatory Information


TSCA Status: All chemical substances in this product are either listed or exempt from listing on the TSCA Inventory.

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 304: This material does not contain any extremely hazardous substances with SARA Title III, Section 304 reportable quantities.

SARA 311/312 hazards: Chronic health hazard

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (de minimis) reporting levels established by SARA, Title III, Section 313.

California Proposition 65: WARNING: This product contains a chemical known to the State of California to cause cancer: Crystalline silica, CAS 14808-60-7, <0.6 %

Section 16 – Other Information

NFPA: HMIS:

Abbreviations and acronyms: ACGIH – American Conference of Governmental Industrial Hygienists
CAS – Chemical Abstracts Service
CFR – Code of Federal Regulations
DOT – Department of Transportation
GHS – Globally Harmonized System
HMIS – Hazardous Materials Identification System
IATA – International Air Transport Association
MSDS – Material Safety Data Sheet
MSHA – Mine Safety and Health Administration
NFPA – National Fire Protection Association
NIOSH – National Institute for Occupational Safety and Health
NTP – National Toxicology Program
OSHA – Occupational Safety and Health Administration
PEL – Permissible Exposure Level
SARA – Superfund Amendments and Reauthorization Act
SDS – Safety Data Sheet
STOT – Specific Target Organ Toxicity
TSCA – Toxic Substance Control Act of 1976
UN – United Nations

Prepared by: deVan Sealants, Inc.

Date: April 14, 2015

These data are offered in good faith as typical values and not as product specifications. No warranty, either expressed or implied is made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate. It is the responsibility of the user to comply with all federal, state and local laws and regulations.