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

### 1.1. Product identifier

- **Product form**: Mixture
- **Product name**: BMC & SMC Polyester / Vinyl Ester Thermoset Molding Compounds
- **Other means of identification**: DIELECTRITE / INSULTRUC / ROSITE

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

- **Use of the substance/mixture**: Multiple Industrial Uses

### 1.3. Details of the supplier of the safety data sheet

- **IDI Composites International**
  407 South 7th Street
  Noblesville, IN USA 46060
  (317) 773-1766

### 1.4. Emergency telephone number

- **Emergency number**: 24-Hour Contact CHEMTREC 1-800-424-9300

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

**Classification (GHS-US)**
- Skin Irrit. 2 H315
- Eye Irrit. 2A H319
- Carc. 1B H350

### 2.2. Label elements

**GHS-US labeling**

- **Hazard pictograms (GHS-US)**: ![Danger](image)

- **Signal word (GHS-US)**: Danger
- **Hazard statements (GHS-US)**: H315 - Causes skin irritation; H319 - Causes serious eye irritation; H350 - May cause cancer
- **Precautionary statements (GHS-US)**: P201 - Obtain special instructions before use; P202 - Do not handle until all safety precautions have been read and understood; P264 - Wash hands and other exposed areas thoroughly after handling; P280 - Wear protective gloves/protective clothing/eye protection; P302 + P352 - If on skin: Wash with plenty of water; P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing; P308 + P313 - If exposed or concerned: Get medical advice/attention; P332+P337 - If eye irritation persists: Get medical advice/attention; P362 - Take off contaminated clothing and wash before reuse; P403+P235 - Store in a well-ventilated place. Keep cool; P501 - Dispose of contents/containers in accordance with local, state and federal regulations

### 2.3. Other hazards

- Sanding, grinding, or other machining of molded parts made from BMC and SMC may create the potential for combustible dust-air mixtures. Follow safe work practices and prevent dust accumulations to minimize explosion hazards.

**Carbon Black (CAS 1333-86-4)**

Carbon black, as a colorant, is a minor component of some BMC and SMC products. It is in a paste form, and therefore does not pose a risk from inhalation.
Styrene (CAS 100-42-5)
A recently published update to an extensive, 55,000-composite worker study concluded there is no evidence that styrene exposure increased their risk of cancer.
In addition, a published study determined that the mechanism for causing cancer in styrene exposed mice is not relevant to humans.

2.4. Unknown acute toxicity (GHS-US)
None of the ingredients are of unknown toxicity

SECTION 3: Composition/information on ingredients

3.1. Substance
Not applicable – the product is a mixture

3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styrene (CAS No)</td>
<td>100-42-5</td>
<td>0 – 20*</td>
<td>Flam. Liq. 3, H226</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 4 (Oral), H302</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Irr. 2, H315</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Irr. 2A, H319</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Carc. 1B, H350</td>
</tr>
<tr>
<td>Carbon Black (CAS No)</td>
<td>1333-86-4</td>
<td>0 - 0.5*</td>
<td>Carc. 2, H351</td>
</tr>
</tbody>
</table>

*The exact percentages will vary by product

SECTION 4: First aid measures

4.1. Description of first aid measures
First-aid measures general: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation: Allow victim to breathe fresh air. Allow the victim to rest.
First-aid measures after skin contact: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.
First-aid measures after 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.
First-aid measures after ingestion: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/injuries after inhalation: Inhalation of vapors may cause CNS depression, respiratory tract irritation and coughing.
Symptoms/injuries after skin contact: Causes skin irritation.
Symptoms/injuries after eye contact: Causes serious eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed
No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media: Dry powder. Carbon dioxide. Water spray. Product is not flammable; use extinguishing agent appropriate for surrounding fire.
Unsuitable extinguishing media: None.

5.2. Special hazards arising from the substance or mixture
Fire hazard: Processing and handling of the product may form combustible dust concentrations in air.
Explosion hazard: Potential dust explosion hazard. When dust becomes airborne and is exposed to an ignition source, sufficient combustible dust may exist to burn in open areas or explode in confined spaces.

5.3. Advice for firefighters
Firefighting instructions: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel
Emergency procedures: Evacuate unnecessary personnel.
6.1.2. For emergency responders
Protective equipment: Equip cleanup crew with proper protection.
Emergency procedures: Ventilate area.

6.2. Environmental precautions
Prevent entry to sewers and public waters. Notify authorities if material enters sewers or public waters.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up: On land, sweep or shovel into suitable containers. Store away from initiators and peroxides.

6.4. Reference to other sections
See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
Hygiene measures: Wash hands and other exposed areas thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Keep only in the original container in a cool, well ventilated place. Keep container closed when not in use.
Incompatible products: Strong bases. Strong acids.
Incompatible materials: Sources of ignition. Direct sunlight.

7.3. Specific end use(s)
No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th></th>
<th>ACGIH</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon Black (1333-86-4)</td>
<td>ACGIH TWA (mg/m³)</td>
<td>3 mg/m³ (inhalable fraction)</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td>3.5 mg/m³</td>
</tr>
<tr>
<td>Styrene (100-42-5)</td>
<td>ACGIH TWA (ppm)</td>
<td>20 ppm</td>
</tr>
<tr>
<td></td>
<td>ACGIH STEL (ppm)</td>
<td>40 ppm</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL (TWA) (ppm)</td>
<td>100 ppm</td>
</tr>
<tr>
<td></td>
<td>OSHA PEL (Ceiling) (ppm)</td>
<td>200 ppm</td>
</tr>
</tbody>
</table>

8.2. Exposure controls
Appropriate engineering controls: Ensure that proper ventilation is provided to maintain exposures below regulated limits.
Personal protective equipment: Avoid all unnecessary exposure.
Hand protection: Protective gloves, such as latex, are recommended.
Eye protection: Safety glasses recommended.
Skin and body protection: Not typically required.
Respiratory protection: Not typically required. If airborne exposures exceed recommended limits wear a NIOSH-approved respirator.
Other information: Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
Physical state: Solid
Appearance: Flexible, soft sheets or doughy compound, pungent odor. A soft, tacky, fibrous material of various colors.
Color: Various Colors
Odor: Characteristic odor of styrene/ vinyl toluene
BMC & SMC Polyester / Vinyl Ester Thermoset Molding Compounds

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor threshold</td>
<td>0.1 ppm (Styrene)</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>0</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>1.1 - 6.1 vol %</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not explosive</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>4.5</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.7 - 2.2</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Negligible in water</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Kow</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
</tbody>
</table>

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

This product is not reactive under normal handling and storage conditions.

10.2. Chemical stability

This product is stable under normal handling and storage conditions.

10.3. Possibility of hazardous reactions

Not anticipated under normal handling and storage conditions.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. High temperatures will induce non-violent polymerization.

10.5. Incompatible materials

Peroxides and polymerization initiators.

10.6. Hazardous decomposition products

Toxic fumes. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

<table>
<thead>
<tr>
<th>Compound</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styrene (100-42-5)</td>
<td></td>
</tr>
<tr>
<td>LD50 oral rat</td>
<td>1000 mg/kg</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>11.7 mg/l/4h</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>1000.000 mg/kg body weight</td>
</tr>
<tr>
<td>ATE US (vapors)</td>
<td>11.700 mg/l/4h</td>
</tr>
<tr>
<td>ATE US (dust, mist)</td>
<td>11.700 mg/l/4h</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Causes serious eye irritation.</td>
</tr>
</tbody>
</table>

01/01/2021 EN (English US) 4/7
Respiratory or skin sensitization: Not classified
Germ cell mutagenicity: Not classified
Carcinogenicity: Carbon black (CAS 1333-86-4)
Carbon black, as a colorant, is a minor component of some BMC and SMC products. It is in a paste form, and therefore does not pose a risk from inhalation.

Styrene (CAS 100-42-5)
A recently published update to an extensive, 55,000-composite worker study concluded there is no evidence that styrene exposure increased their risk of cancer.
In addition, a published study determined that the mechanism for causing cancer in styrene exposed mice is not relevant to humans.

### Carbon Black (1333-86-4)

<table>
<thead>
<tr>
<th>IARC group</th>
<th>2B - Possibly carcinogenic to humans</th>
</tr>
</thead>
<tbody>
<tr>
<td>In OSHA Hazard Communication Carcinogen list</td>
<td>Yes</td>
</tr>
</tbody>
</table>

| National Toxicology Program (NTP) Status | 3 - Reasonably anticipated to be Human Carcinogen |
| In OSHA Hazard Communication Carcinogen list | Yes |

### Styrene (100-42-5)

<table>
<thead>
<tr>
<th>IARC group</th>
<th>2A - Probable carcinogenic to humans</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Toxicology Program (NTP) Status</td>
<td>3 - Reasonably anticipated to be Human Carcinogen</td>
</tr>
<tr>
<td>In OSHA Hazard Communication Carcinogen list</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Reproductive toxicity: Not classified
Specific target organ toxicity (single exposure): Not classified
Specific target organ toxicity (repeated exposure): Not classified
Aspiration hazard: Not classified
Potential Adverse human health effects and symptoms: No additional information available
Symptoms/injuries after inhalation: Inhalation of vapors may cause CNS depression, respiratory tract irritation and coughing.
Symptoms/injuries after skin contact: Causes skin irritation.
Symptoms/injuries after eye contact: Causes serious eye irritation.

**SECTION 12: Ecological information**

### 12.1. Toxicity

<table>
<thead>
<tr>
<th><strong>Styrene (100-42-5)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
</tr>
<tr>
<td>EC50 Daphnia 1</td>
</tr>
<tr>
<td>LC50 fish 2</td>
</tr>
<tr>
<td>NOEC (acute)</td>
</tr>
</tbody>
</table>

### 12.2. Persistence and degradability

**Carbon Black (1333-86-4)**

Persistence and degradability: Not established.

### 12.3. Bioaccumulative potential

**Carbon Black (1333-86-4)**

Bioaccumulative potential: Not established.

**Styrene (100-42-5)**

| BCF fish 1 | 13.5 |
| Log Pow | 2.95 |

### 12.4. Mobility in soil

No additional information available
12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local, state and federal regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)
In accordance with DOT
Not regulated for transport

Additional information

ADR
No additional information available

Transport by sea
Marine Pollutant: No

Air transport
No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

<table>
<thead>
<tr>
<th>BMC &amp; SMC Polyester / Vinyl Ester Thermoset Molding Compounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>All constituents are in compliance with the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BMC &amp; SMC Polyester / Vinyl Ester Thermoset Molding Compounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>SARA Section 311/312 Hazard Classes</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Carbon Black (1333-86-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Styrene (100-42-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on United States SARA Section 313

| SARA Section 313 - Emission Reporting | 0.1 % deminimis |

15.2. International regulations

CANADA

Carbon Black (1333-86-4)
Listed on the Canadian DSL (Domestic Sustances List)

Styrene (100-42-5)
Listed on the Canadian DSL (Domestic Sustances List)

EU-Regulations

Carbon Black (1333-86-4)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on ELINCS (European List of Notified Chemical Substances)

Styrene (100-42-5)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Classification according to Regulation (EC) No. 1272/2008 [CLP]
No additional information available
15.3. US State regulations

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Styrene (100-42-5)</th>
<th>U.S. - California - Proposition 65 - Carcinogens List</th>
<th>U.S. - California - Proposition 65 - Developmental Toxicity</th>
<th>U.S. - California - Proposition 65 - Reproductive Toxicity - Female</th>
<th>U.S. - California - Proposition 65 - Reproductive Toxicity - Male</th>
<th>No significance risk level (NSRL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 16: Other information

Other information : None.

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.