SECTION 1 – IDENTIFICATION

Product name: Recycled Tire Rubber - ABR
Brand: Entech Inc
Product uses: Various Uses

SECTION 2 – HAZARD(S) IDENTIFICATION

Emergency Overview

WHMIS Classification: Not a WHMIS controlled substance
OSHA Hazards: No known OSHA hazards

GHS label elements, including precautionary statements
Signal Word: None
Hazard statement(s): None
Precautionary statement(s): P281: Use personal protective equipment as required (see Section 8)

HMIS Classification
Health hazard: 1
Flammability: 1
Physical hazards: 1

Potential health effects
Inhalation: Odor/vapors may be a nuisance in some individuals. In some individuals, short term exposure of material may produce mild and temporary discomfort to the respiratory tract resulting in wheezing, tightness in the chest, shortness of breath and coughing. Although they may be present in low amounts, dust and small pieces of material may aggravate bronchitis, asthma, and emphysema, if inhaled.
Skin: Although being a fine material, particulate matter and dust may be present in low quantities, contact with such items may result in irritation (redness/itching) or other effects.
Eyes: Material is abrasive if it enters the eye, which can cause irritation to severe damage if left untreated.
Ingestion: Irritation of mucus membranes of mouth, throat, esophagus and stomach along with nausea may occur. Abrasion to the mouth, esophagus, stomach and intestinal tract may occur.
Repeated exposure: Repeated exposure to material may result in sensitization in susceptible individuals.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Material</th>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Concentration (%wt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural rubber</td>
<td>9006-04-6</td>
<td>232-689-0</td>
<td>N/AV</td>
<td>15 – 40</td>
</tr>
<tr>
<td>Synthetic rubber</td>
<td>9003-55-8</td>
<td>N/AV</td>
<td>N/AV</td>
<td>15 – 40</td>
</tr>
<tr>
<td>Carbon black</td>
<td>1333-86-4</td>
<td>215-609-9</td>
<td>N/AV</td>
<td>15 – 40</td>
</tr>
<tr>
<td>Zinc oxide</td>
<td>1314-13-2</td>
<td>215-222-5</td>
<td>030-013-00-7</td>
<td>1 – 5</td>
</tr>
<tr>
<td>Sulfur</td>
<td>7704-34-9</td>
<td>231-722-6</td>
<td>016-094-00-1</td>
<td>0.1 – 0.5</td>
</tr>
<tr>
<td>Fillers, accelerators, anti-ozonants</td>
<td>N/AP</td>
<td>N/AP</td>
<td>N/AP</td>
<td>3 – 7</td>
</tr>
</tbody>
</table>

Note: Compositional data is from an analyzed representative sample provided April 23, 2018.
SECTION 4 – FIRST-AID MEASURES

General advice
If negative symptoms develop while handling the product, move out of the area to prevent further exposure. Consult a physician as a precautionary measure if symptoms develop after being subjected to unprotected exposure of the material. Show this safety data sheet to the doctor in attendance.

If inhaled
In emergency situations, use proper respiratory protection and immediately remove the affected person from exposure. Keep at rest. Administer artificial respiration if breathing has stopped. Seek medical attention.

In case of skin contact
Wash exposed skin thoroughly with soap and water. If irritation develops and is prolonged and/or sore, consult a physician.

In case of eye contact
Flush eyes with plenty of water for at least 15 minutes. Avoid rubbing the eye. If experiencing prolonged irritation or soreness, seek medical attention.

If swallowed
Do not induce vomiting. Rinse mouth well with water. Never give anything by mouth to an unconscious person. Seek medical attention.

SECTION 5 – FIRE-FIGHTING MEASURES

Conditions of flammability
Non-flammable under standard use conditions. Material must be heated above 392°F (200°C) and an ignition source introduced before burning will occur.

Suitable extinguishing media
Fire extinguishing substances: dirt, sand, dry chemical, CO₂, alcohol-resistant foam, or F500 encapsulating agent.
If safe to do so, smothering the fire with large quantities of dirt or sand is usually the best option for extinguishing fires.
The material will be extremely hot if in liquid form. Be sure to keep distance between personnel and the fire.
If the fire is small and localized, CO₂ or foam are acceptable extinguishing substances. Due to the potential of pyrolytic oil being produced during uncontrolled burning, use of water may result in highly contaminated run-off that will require containment.
For large fires, trained firefighting personnel should be placed in charge of firefighting measures.

Special protective equipment for firefighters
Respiratory and eye protection are required for firefighting personnel.
A self-contained breathing apparatus (SCBA) meeting NFPA standards should be used for any significant indoor or outdoor fires.
For small outdoor fires, which may easily be extinguished with a portable fire extinguisher, use of a SCBA may not be required.
Contact with the smoke and fumes should be avoided. With burning or high heating, the material may melt, resulting in a sticky, molten material.

Hazardous combustion products
Thick, black, acrid smoke. Oxides of carbon, nitrogen and sulfur.
Uncontrolled burning may result in products of incomplete combustion including polynuclear aromatic hydrocarbons (naphthalene, anthracene, etc); aromatic hydrocarbons including benzene, toluene, xylene, styrene, etc; paraffinic oils; particulate and ash residues.

Explosion data – sensitivity to mechanical
Not explosive on impact

Explosion data – sensitivity to static discharge
Not explosive when subject to static discharge

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal precautions
Ensure adequate ventilation to keep material component levels below workplace exposure limits. Avoid excessive dust formation and accumulation. Avoid prolonged exposure to vapors/odors and dusts created by material.

Environmental precautions
Precautionary measures to prevent large quantities of the product from entering and/or accumulating in drains should be implemented. In case of emergency, prevent further leakage or spillage if safe to do so.

Methods and material for containment and cleaning up
LAND SPILL : Sweep or vacuum material to prevent slip hazard. Try not to create dust. Collect for reuse if possible.
WATER SPILL  : Material floats initially. Attempt to contain floating material and remove it from the surface by skimming first. Contain area and, if material sinks, try to recover material as best possible without disturbing surroundings.
SECTION 7 – HANDLING AND STORAGE

Precautions for safe handling
For any application, use in a well-ventilated area or set engineering controls (ventilation) to keep airborne concentrations below the workplace exposure limits and prevent the build up of dust. Do not handle or store near an open flame or sources of heat.

Conditions for safe storage
Keep material away from incompatible materials or conditions. Material can be safely stored outdoors in a contained or sectioned off area. If material is stored inside, it should be kept in a well-ventilated location to keep airborne concentrations below the workplace exposure limits.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>Value</th>
<th>Control Parameters</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural rubber</td>
<td>9006-04-6</td>
<td>TWA</td>
<td>0.0001 mg/m³</td>
<td>USA. ACGIH (inhalable proteins)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>35 mg/m³</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
</tr>
<tr>
<td>Synthetic rubber</td>
<td>9003-55-8</td>
<td>N/AV</td>
<td>N/AV</td>
<td>No occupational exposure limits set for material</td>
</tr>
<tr>
<td>Carbon black</td>
<td>1333-86-4</td>
<td>TWA</td>
<td>3.5 mg/m³</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
</tr>
<tr>
<td>Zinc oxide</td>
<td>1314-13-2</td>
<td>TWA</td>
<td>2 mg/m³</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
</tr>
<tr>
<td>Sulfur</td>
<td>7704-34-9</td>
<td>N/AV</td>
<td>N/AV</td>
<td>No occupational exposure limits set for material in USA</td>
</tr>
<tr>
<td>Fillers, accelerators, anti-</td>
<td>N/AP</td>
<td>N/AV</td>
<td>N/AV</td>
<td>No occupational exposure limits set for material in USA</td>
</tr>
<tr>
<td>ozonants</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks: If multiple exposure limits exist for a substance, the limits from the State(s), Province(s) or Territory with the highest and lowest values in the country are reported.

Personal Protection Equipment

Respiratory protection
Respiratory protection is typically not required. Where protection from nuisance levels of dust are desired, use of a dust mask is recommended. Typical certified dusts masks types are N95 (US) or P1 (EN 143).

Hand protection
Short term exposure does not require gloves. Gloves are recommended for continuous or prolonged exposure of material. Any type of protective gloves are recommended to avoid prolonged or repeated skin contact. If gloves are disposable, dispose of contaminated gloves after use in accordance with applicable laws and work place practices. If gloves are re-usable, wash periodically to avoid buildup of material matter. Wash and dry hands.

Eye protection
Although they may be present in low concentrations, if dust or fines are likely to become airborne, safety glasses with side shields or goggles should be worn. When using eye protection, equipment should be tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Skin and body protection
Long sleeved clothing and full length pants should be worn if repeated or prolonged direct contact is likely to occur.

Hygiene measures
Handle in accordance with good industrial and commercial hygiene and safety practices. Wash hands before breaks and at the end of the work day.

Specific engineering controls
Use in a well-ventilated area or set engineering controls to keep airborne concentrations below the exposure limits.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Appearance</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Solid - small (less than ~8 mm diameter) irregularly shaped granules of rubber based material</td>
</tr>
<tr>
<td>Color</td>
<td>Black</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Safety data</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting/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>&gt;100°C; &gt;212°F (ASTM D3828)</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>1.05-1.13 g/mL @ 20°C</td>
</tr>
<tr>
<td>Water solubility</td>
<td>Not soluble</td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative vapour density</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor</td>
<td>Rubber or hydrocarbon-like odor</td>
</tr>
</tbody>
</table>
SECTIONS 10 – STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
No data available

Conditions to avoid
Material may slowly degrade on storage, especially in the presence of iron particles and combined with heat or pressure, subsequently releasing carbon monoxide and carbon dioxide. Heat, ignition sources, and oxidizing agents should be avoided. Although typically present in small amounts, dust may be explosive under certain conditions (i.e. high airborne concentrations) in the presence of an ignition source.

Materials to avoid
Acids, oxidizing agents, iron particles, excess moisture

Hazardous decomposition products
Oxides of carbon, nitrogen, sulfur and metals under fire or oxidative conditions

SECTIONS 11 – TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50
No data available

Inhalation LC50
No data available

Dermal LD50
No data available

Other information on acute toxicity
No data available

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
This product contains a component (when isolated) that has been reported to be possibly carcinogenic (specifically when inhaled) based on its IARC, ACGIH, NTP or EPA classification. Limited evidence to carcinogenicity in animal studies. IARC: 2B – Group 2B: Possibly carcinogenic to humans (Carbon black)

Reproductive toxicity
No data available

Specific target organ toxicity – single exposure (Globally Harmonized System)
No data available

Specific target organ toxicity – repeated exposure (Globally Harmonized System)
No data available

Aspiration hazard
No data available
### Potential health effects

**Inhalation**
Odor/vapors may be a nuisance in some individuals. In some individuals, short term exposure of material may produce mild and temporary discomfort to the respiratory tract resulting in wheezing, tightness in the chest, shortness of breath and coughing. Although they may be present in low amounts, dust and small pieces of material may aggravate bronchitis, asthma, and emphysema, if inhaled.

**Skin**
Although being a fine material, particulate matter and dust may be present in low quantities, contact with such items may result in irritation (redness/itching) or other effects.

**Eyes**
Material is abrasive if it enters the eye, which can cause irritation to severe damage if left untreated.

**Ingestion**
Irritation of mucus membranes of mouth, throat, esophagus and stomach along with nausea may occur. Abrasion to the mouth, esophagus, stomach and intestinal tract may occur.

### Signs and Symptoms of Exposure
To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

### Synergistic effects
No data available

### Additional information
None

### SECTION 12 – ECOLOGICAL INFORMATION (non-mandatory)

**Toxicity**
No data available

**Persistence and degradability**
No data available

**Bioaccumulative potential**
No data available

**Mobility in soil**
No data available

**PBT and vPvB**
No data available

**Other adverse effects**
Extensive ecological testing has not been performed on the product. Standard good environmental workplace practices should be implemented when handling material in a workplace or external setting.

### SECTION 13 – DISPOSAL CONSIDERATIONS (non-mandatory)

**Product**
The product is not a characteristic nor is listed as hazardous waste. Product materials that are no longer usable or that may have become contaminated should be placed in disposable containers and such materials should be managed and disposed in compliance with applicable federal, state, provincial, and local regulations.

**Contaminated packaging**
Packaging that is no longer usable or may have become contaminated should be placed in disposable containers and managed, recycled, or disposed of in compliance with applicable federal, state, and local regulations.

### SECTION 14 – TRANSPORT INFORMATION (non-mandatory)

**DOT (US)**
Not dangerous goods

**IMDG**
Not dangerous goods

**IATA**
Not dangerous goods

### SECTION 15 – REGULATORY INFORMATION (non-mandatory)

**WHMIS Classification**
Not WHMIS controlled

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

**OSHA Hazards**
No known OSHA hazards
SECTION 16 – OTHER INFORMATION

Further information
Prepared May 4, 2018. The information, recommendations and suggestions in the Safety Data Sheet have been compiled from tests and data believed to be reliable. The above information is believed to be correct, but is not under guarantee or warrantee to be all inclusive and shall be used only as a guide. The information contained herein is based on the present state of our knowledge and is only applicable to the product or material set forth in Section 1. The information provided may not be applicable or complete if such product or material is used in combination with any other product or material, or in any process. The information provided on the product or material is with regard to appropriate safety precautions and does not represent any guarantee of the properties of the product. It is the user’s obligation to determine the safety, toxicity and suitability for their own use of the product described herein and to comply with all applicable laws and regulations. Liberty Tire, LLC and its affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.