Material Safety Data Sheet (MSDS)

SECTION I - CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Chemical Name: MIXTURE

CAS No.: NOT APPLICABLE

Product Description: COLD APPLIED TAR MASTIC

Hazard Classification: HEALTH - 3   FLAMMABILITY - 2   REACTIVITY - 0

Manufacturer/Supplier: COMMERCIAL INNOVATIONS, INC.
9105 WAY AVENUE
CLEVELAND, OHIO 44105
PH: (800) 350-2142  FAX: (800) 350-2307

Internet Address: http://www.com-innov.com

24 HR EMERGENCY ASSISTANCE: 1-800-762-8225

SECTION II - HAZARDOUS INGREDIENTS/COMPOSITION

<table>
<thead>
<tr>
<th>HAZARDOUS INGREDIENTS</th>
<th>CAS NUMBER</th>
<th>AGCIH TLV</th>
<th>WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refined Coal Tar Pitch</td>
<td>65996-93-2</td>
<td>0.2mg/m³**</td>
<td>&lt;70</td>
</tr>
<tr>
<td>Aromatic Solvent</td>
<td>64742-85-6</td>
<td>100 PPM</td>
<td>&lt;25</td>
</tr>
<tr>
<td>Fillers &amp; Fibers</td>
<td>mixture</td>
<td>NA</td>
<td>&lt;25</td>
</tr>
<tr>
<td>Polymer</td>
<td>proprietary</td>
<td>NA</td>
<td>&lt;7</td>
</tr>
</tbody>
</table>

** Coal Tar Pitch volatiles (benzene soluble fraction)

SECTION III - HAZARDS IDENTIFICATION

ROUTES OF ENTRY: INHALATION, DERMAL, INGESTION.

ACUTE HEALTH HAZARD:

INHALATION: Overexposure to fumes, vapors or dust can cause temporary respiratory tract irritation and may include coughing, sneezing, and swollen or irritated nasal, mucousa, or sinuses. Prolonged exposure in significant excess of permissible air concentrations can result in systemic symptoms such as: salivation; vomiting; respiratory difficulties; headache; loss of pupillary reflexes; dizziness; weakness; possible loss of coordination and collapse; cyanosis; hypothermia; and convulsions.

SKIN CONTACT: Direct skin contact can result in irritation, which, when accentuated by sunlight, may result in phototoxic skin reaction. Prolonged and repeated skin contact in the absence of recommended hygiene practices may cause acne, folliculitis and more serious skin disorders such as changes in skin pigmentation, ulcerations, benign skin growths and skin cancer.
**EYES CONTACT:** Overexposure to product fumes, vapors or dusts can result in irritation and burning to the eyes. Eye contact with this product will result in irritation, which in the absence of recommended first aide, can result in minor burns to the eyes.

**INGESTION:** Ingestion may result in irritation of the gastrointestinal tract accompanied by one or more of the following: nausea and vomiting, abdominal discomfort, rapid pulse, etc.. In extreme cases, cardiovascular collapse may occur.

**EFFECTS OF CHRONIC EXPOSURE:** Prolonged or repeated contact over many years in the absence of recommended exposure control/personal protection measures and first aid may lead to changes in skin pigmentation, benign skin growths, and in some cases, skin cancer. These effects appear to be exacerbated by exposure to sun. In addition, inhalation if vapors over a period of several years also in the absence of recommended exposure control/personal protection measures may present a lung cancer hazard.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Persons with pre-existing skin disorders may be at increased risk from exposure. Individuals with chronic respiratory disorders may be more susceptible to the effects of exposure to any vapor, fume, or airborne particulate matter. Persons with a history of central nervous system (CNS) functional illness may be more susceptible to the effects when working with this product.

**CARCINOGENICITY:** NTP - X; IARC - X; OSHA - X; ACGIH - X

**THERE HAS BEEN NO CONCLUSIVE EVIDENCE OF SEVERE OR PROLONGED DISORDERS INCLUDING LUNG CANCER FROM THE NORMAL SAFE RECOMMENDED USE OF COAL TAR ALONE. Long-term overexposure to Coal Tar Pitch Volatiles in excess of the Permissible Exposure Limit may cause cancer. A laboratory study has shown that extreme overexposure to Coal Tar Pitch Particulate resulted in lung cancer in experimental animals. The route of administration and the doses used in the animal study were extreme; human exposure of this magnitude is not expected to occur with any use of this product.**

### SECTION IV - FIRST AID PROCEDURES

**INHALATION:** Remove victim from exposure area immediately to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately. Keep person warm and quiet.

**SKIN CONTACT:** If contact occurs, remove contaminated clothing/shoes and wash exposed area with non-abrasive soap and water. Do not use solvents on skin as they promote absorption of this material. If irritation persists, get medical attention. Do not re-use work clothing until they have been thoroughly cleaned.

**EYE CONTACT:** If eye contact occurs, flush eyes immediately with large amounts of water, occasionally lifting eyelids and get medical attention.

**INGESTION:** Give 3-4 glasses of water, but DO NOT induce vomiting. If vomiting occurs, give fluids again. Get medical attention to determine whether vomiting or evacuation of the stomach is necessary. Do not give anything by mouth to an unconscious or convulsing person. **Consult local Poison Control Center, IMMEDIATELY!**

**DECONTAMINATION PROCEDURES:** Use emergency shower if available. Remove all contaminated clothing to prevent further absorption. Wash all clothing and exposed areas of the body twice with soap and water. Leather shoes that have been saturated should be discarded.
SECTION V - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: Minimum 112°F (44°C) TCC (hydrocarbon solvent)

AUTOIGNITION TEMPERATURE: 910°F (488°C)

LEL (LOWER EXPLOSION LIMIT): 0.5% (hydrocarbon solvent)

UEL (UPPER EXPLOSION LIMIT): 6.0% (hydrocarbon solvent)

EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemicals, or water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Self-contained (full face MSHA/NIOSH) breathing apparatus and full protective clothing should be worn when fumes and/or smoke are present.

Water or foam can be used to contain unconfined tar fires, however, water may cause frothing or eruption in confined fires (tanks, etc.) which may endanger the life of the fire fighter. Normal fire fighting procedures may be used. Use water or water spray to cool fire exposed containers and structures and to protect personnel.

UNUSUAL FIRE AND EXPLOSION HAZARD: Burning may emit hazardous fumes/vapors which may be in concentrations greater than PEL/TLVs. Coal tar pitch at elevated temperatures may generate vapors that can form flammable/explosive mixtures in the presence of air and a source of ignition. Airborne pitch dust can form explosive mixtures with air. Closed containers may explode when exposed to extreme heat. Liquid molten pitch at elevated temperatures will sustain combustion. Water/fog can control unconfined tar fires, but water may cause frothing or eruption in closed tanks. When heated to decomposition, it emits carbon monoxide and dioxide, oxides of nitrogen and sulfur, and hydrocarbons from combustion.

SECTION VI - ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF RELEASED OR SPILLED: Avoid breathing vapors and contact with the skin and eyes. For large spills eliminate all ignition sources (flares, flames, pilot lights, electrical sparks). Attempt to eliminate the spill at the source (close valves, upright drums, etc.), if possible without hazard. Ventilate the spill area if it occurs indoors. Contain the spill or leak with sand, clay, earth, floor absorbent, or other material. Collect in proper containers for disposal.

Keep spills and cleaning run-off out of municipal sewers and open bodies of water. Spills or releases to the environment may require notifications to appropriate Federal, State, and Local authorities.

EPA Hazardous Waste Number: D001 (Ignitable per 40 CFR 260.21)

SECTION VII - SAFE HANDLING AND STORAGE

HANDLING AND STORAGE PRECAUTIONS: Avoid prolonged and repeated contact with skin or breathing of vapors, dusts, or fumes. Ensure work area is well ventilated. Wear appropriate protective equipment (see section VIII).

DO NOT LET AIR INTAKES DRAW ODOR INDOORS.
KEEP OUT OF REACH OF CHILDREN.
STORE AT ROOM TEMPERATURE

CONTAMINATED EQUIPMENT REPAIR/MAINTENANCE PRECAUTIONS: Wear protective equipment when performing maintenance on contaminated equipment.
SECTION VIII - EXPOSURE CONTROL/PERSONAL PROTECTION

VENTILATION: Use in areas with adequate natural ventilation or provide sufficient local/general exhaust ventilation in pattern/volume to maintain concentrations below the PEL/TLV and to maintain areas below flammable or explosive level concentrations.

GLOVES: Use chemical resistant, if needed, to avoid prolonged or repeated skin contact.

EYE PROTECTION: Use safety glasses, splash goggles or face shield when eye contact may occur. Do not wear contact lenses when using this product.

RESPIRATOR: If under normal conditions of use, irritation occurs, or if the TLV is exceeded, use a NIOSH/MSHA approved air purifying respirator with organic vapor cartridges or canisters and a dust/mist pre-filter. In situations where the H2S exceeds the PEL or TLV, supplied air respirators or SCBA's are required.

SKIN PROTECTION: For exposed skin, use protective barrier creams. Also protect skin from direct sunlight. For outdoor work use approved waterproof sunscreen with an SPF of 25 or greater. Re-apply every 90 minutes while in direct sun.

CLOTHING: Full long-sleeved clothing closed at the neck and non-porous gloves are recommended. In addition, aprons, jackets, caps, and shoes are recommended to prevent skin contact with coal tar. To further reduce skin exposure, apply approved creams to form an un-penetrable barrier on the skin. A complete change of work clothing should be used each day. Launder separately from other household clothing.

HYGIENIC PRACTICES: Wash hands thoroughly before eating, drinking, smoking or using the restroom. A complete soap/water shower and/or steam bath should be taken at the end of every work day. Provide readily available eye wash and wash stations.

SECTION IX - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT: 313ºF (156ºC) (hydrocarbon solvent)
SPECIFIC GRAVITY: Greater than 1.00 (water = 1)
VAPOR PRESSURE: 2.7mm Hg for solvent
VAPOR DENSITY: 4.2 for solvent (air = 1)
EVAPORATION RATE: 0.37 for solvent (Ethyl Ether = 1)
SOLUBILITY IN WATER: NEGLIGIBLE
pH: NOT APPLICABLE
% VOLATILE by VOLUME: <30

SECTION X - STABILITY AND REACTIVITY DATA

STABILITY: Stable under normal conditions. Avoid handling near open flame. CONDITIONS TO AVOID: Open flames and intense heat.
MATERIALS TO AVOID: Strong oxidizers. Also avoid contact with water when confined and in a molten state.
HAZARDOUS DECOMPOSITION: Carbon monoxide and dioxide, oxides of nitrogen and sulfur, hydrocarbons from combustion.
WILL POLYMERIZATION OCCUR: No
SECTION XI - TOXICOLOGICAL INFORMATION

DELAYED (SUBCHRONIC AND CHRONIC) EFFECTS: Long term exposure to Coal Tar Pitch Volatiles (CTPV), above the recommended exposure limit, has been associated with the development of skin, kidney, and lung cancer.

OTHER DATA: IARC Group 1 - Sufficient evidence of carcinogenicity in humans. No scientific study supports an association between coal tar pitch exposure and human reproductive hazards. Available data characterizes coal tar pitch as a mutagen.

SECTION XII - ECOLOGICAL INFORMATION

Components could cause adverse effects in wildlife.

SECTION XIII - DISPOSAL CONSIDERATIONS

Dispose of according to applicable Federal, State, County, and Local requirements.

EPA Hazardous Waste Number: D001 (Ignitable per 40 CFR 260.21)

SECTION XIV - TRANSPORTATION INFORMATION

NON-BULK < 119 gallon container size

DOT-U.S./MOT-CANADA/INTL. (TRUCK/RAIL)

PROPER SHIPPING NAME: NONREGULATED MATERIAL

HAZARD CLASS: NOT APPLICABLE

IDENTIFICATION NO: NOT APPLICABLE

PACKAGING GROUP: NOT APPLICABLE


BULK > 119 gallon container size

DOT-U.S./MOT-CANADA/INTL. (TRUCK/RAIL)
INTL. (VESSEL/AIR) - any container size

PROPER SHIPPING NAME: COAL TAR DISTILLATES

HAZARD CLASS: 3

IDENTIFICATION NO: UN1136

PACKAGING GROUP: III

SECTION XV - REGULATORY INFORMATION

EPA Hazardous Waste Number: D001 (Ignitable per 40 CFR 260.21)

Reportable Quantity (RQ), EPA Regulation 40 CFR 302: (CERCLA Section 102):

<table>
<thead>
<tr>
<th>Substance</th>
<th>Weight %</th>
<th>RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthracene</td>
<td>0.23</td>
<td>5,000</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>0.08</td>
<td>100</td>
</tr>
<tr>
<td>Benzo (a) Pyrene</td>
<td>0.20</td>
<td>1</td>
</tr>
<tr>
<td>Pyrene</td>
<td>0.17</td>
<td>5,000</td>
</tr>
<tr>
<td>Chrysene</td>
<td>0.21</td>
<td>100</td>
</tr>
<tr>
<td>Acenaphthene</td>
<td>0.13</td>
<td>100</td>
</tr>
<tr>
<td>Benzo (a) Anthracene</td>
<td>0.22</td>
<td>1</td>
</tr>
<tr>
<td>Benzo (b&amp;k) Flouranthene</td>
<td>0.42</td>
<td>1</td>
</tr>
<tr>
<td>Benzo (g,h,i) Perylene</td>
<td>0.12</td>
<td>5,000</td>
</tr>
<tr>
<td>Benzo (a,h) Anthracene</td>
<td>0.06</td>
<td>1</td>
</tr>
<tr>
<td>Dibenzofuran</td>
<td>0.09</td>
<td>1</td>
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<tr>
<td>Fluorene</td>
<td>0.15</td>
<td>5,000</td>
</tr>
<tr>
<td>Flouranthene</td>
<td>0.21</td>
<td>1</td>
</tr>
<tr>
<td>Indeno (1,2,3,c,d) Pyrene</td>
<td>0.11</td>
<td>1</td>
</tr>
<tr>
<td>Phenanthrene</td>
<td>0.57</td>
<td>5,000</td>
</tr>
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</table>
Note: THIS INFORMATION REQUIRED FOR EMERGENCY RESPONSE REPORTING.

Extremely Hazardous Substance(s) Threshold Planing Quantity (TPQ),
EPA Regulation 40 CFR 355: (SARA Section 302):

<table>
<thead>
<tr>
<th>Substance</th>
<th>Weight %</th>
<th>TPQ (lbs)</th>
<th>RQ (lbs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pyrene</td>
<td>1.3 max</td>
<td>10,000</td>
<td>5,000</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Substance</th>
<th>Weight %</th>
<th>CAS No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthracene</td>
<td>0.3 max</td>
<td>120-12-7</td>
</tr>
<tr>
<td>Phenanthrene</td>
<td>0.7 max</td>
<td>85-01-8</td>
</tr>
<tr>
<td>Naphthalene</td>
<td>0.1 max</td>
<td>91-20-3</td>
</tr>
</tbody>
</table>

EPA Hazard Classification Code:

<table>
<thead>
<tr>
<th>Acute Hazard</th>
<th>Cronic Hazard</th>
<th>Fire Hazard</th>
<th>Pressure Hazard</th>
<th>Reactive Hazard</th>
<th>Not Applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>XXX</td>
<td>XXX</td>
<td>XXX</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SARA 313: This product contains the following material(s) subject to the reporting requirements under Section 313 of Title III of the Superfund Amendments and Reauthorization Act and 40 CFR 372.

- Anthracene 0.3% max CAS No. 120-12-7
- Phenanthrene 0.7% max CAS No. 85-01-8
- Naphthalene 0.1% max Cas No. 91-20-3

VOC STATUS: Less than 270 g/l. This product complies with the VOC codes of all State and Federal regulations.

CA PROP 65: This product contains a chemical known to the State of California to cause cancer.

SECTION XVI - ADDITIONAL INFORMATION

CHANGES: Update format

Disclaimer

The information contained in this Material Safety Data Sheet has been prepared in accordance with the OSHA Hazard communication Standard CFR 1910.1200. This information relates specifically to the product designated and may not be valid for the product when used in combination with any other materials or products or in a particular process. The information is, to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness, whether originating within the company or not. The user should review this information, satisfy itself as to its suitability and completeness, and pass on the information to its employees or customers in accordance with applicable federal, state or local hazard communications requirements. We do not accept responsibility for any loss or damage which may occur from the use of this information.

Prepared By: Matt Robinson Date: 01/20/2015

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