1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Remabond Spray Cement

Chemical Family: Polymer & Alkane Hydrocarbon Solution

Product Use: Tire Repair & Retreading Cement

Restrictions on Use: Use as directed by manufacturer

Manufacturer: Rema Tip Top/North America, Inc.
1500 Industrial Blvd.
Madison, GA 30650
Phone: 706-752-4000

24-Hour Emergency Phone Number: North America: 800-424-9300 (CHEMTREC)
International: 703-527-3887 (CHEMTREC) Collect Calls Accepted

2. HAZARDS IDENTIFICATION

GHS Classification

Physical Hazards
Flammable Liquid, Category 2

Health Hazards
Skin Irritation, Category 2
Skin Sensitization, Category 1B
Carcinogenicity, Category 2
Specific Target Organ Systemic Toxicity, Single Exposure, Category 3, Central Nervous System [Inhalation, Ingestion]
Aspiration Hazard, Category 1

Environmental Hazards
Chronic Aquatic Toxicity, Category 2

GHS Labeling
Pictograms:
Signal Word: Danger!

Hazard Statements
H225: Highly flammable liquid and vapor
H304: May be fatal if swallowed and enters airways
H315: Causes skin irritation
H317: May cause an allergic skin reaction
H336: May cause drowsiness or dizziness
H351: Suspected of causing cancer
H411: Toxic to aquatic life with long lasting effects

Precautionary Statements
Prevention:
P210: Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P233: Keep container tightly closed.
P235: Keep cool.
P240: Ground/bond container and receiving equipment.
P241: Use explosion-proof electrical/ventilating/lighting/equipment.
P242: Use only non-sparking tools.
P243: Take precautionary measures against static discharge.
P261: Avoid breathing vapors.
P264: Wash hands and exposed skin thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area.
P272: Contaminated work clothing should not be allowed out of the workplace.
P273: Avoid release to the environment.
P280: Wear protective gloves/eye protection/face protection.
P281: Use personal protective equipment as required.

Response:
P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
P303 + P361 + P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing.  Rinse skin with water/shower.
P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
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.
P321: Specific treatment found in supplemental First Aid Section of this SDS (Section 4).
P332 + P313: If skin irritation occurs: Get medical advice/attention.
P333 + P313: If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313: If eye irritation persists: Get medical advice/attention.
P362: Take off contaminated clothing and wash before reuse.
P370 + P378: In case of fire: Use dry chemical, foam, carbon dioxide or water spray for extinction.
3. COMPOSITION/ INFORMATION ON INGREDIENTS

Chemical characterization
Polymer & Alkane Hydrocarbon Solution

<table>
<thead>
<tr>
<th>Component*</th>
<th>CAS #</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural rubber</td>
<td>9006-04-6</td>
<td>5 - 10</td>
</tr>
<tr>
<td>n-Heptane</td>
<td>142-82-5</td>
<td>80 - 95</td>
</tr>
<tr>
<td>Carbon Black, amorphous</td>
<td>1333-86-4</td>
<td>1 - 5</td>
</tr>
<tr>
<td>4-(1-dimethylethyl)-Phenol</td>
<td>60303-68-6</td>
<td>&lt; 1</td>
</tr>
</tbody>
</table>

*The above listed components are OSHA hazardous materials which contribute to this products’ GHS Hazard Categorization as prescribed in OSHA’s Hazard Communication 29 CFR 1910.1200.

4. FIRST AID MEASURES

Inhalation
Symptoms & Effects: Nausea, headache, dizziness, drowsiness, irritation of the nose, throat and lungs
Measures: Immediately move outdoors or to fresh air. If not breathing or if breathing is difficult, provide artificial respiration or oxygen. If irritation occurs, seek medical attention.

Skin Contact
Symptoms & Effects: Slight skin irritation, redness
Measures: Wash contaminated areas with plenty of water after use. Wash contaminated clothing before reuse. If skin irritation persists, seek medical attention.

Eye Contact
Symptoms & Effects: Eye irritation, stinging sensation, tearing, redness
Measures: Immediately flush eyes gently with plenty of water for at least 15 minutes. While washing, remove contact lenses if present and easy to do so and continue rinsing. Rinse beneath eyelids by holding eyelids apart with clean fingers while washing. If eye irritation persists, seek medical attention.

Ingestion
Symptoms & Effects: Stomach or intestinal irritation, nausea, vomiting, nausea, dizziness, drowsiness
Measures: Seek immediate medical attention. If awake and alert, rinse mouth and drink plenty of water to help dilute the material. Do NOT induce vomiting as this substance is an aspiration hazard. Do not give liquids to a drowsy or unconscious person. If vomiting occurs, keep heads below hips to prevent aspiration.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Dry chemical, Carbon dioxide, Alcohol-resistant foam

Unsuitable Extinguishing Media: None identified

Hazardous Combustion Products: Carbon monoxide, Carbon dioxide

Protective Equipment for Fire-Fighters: Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA).

Precautions for Fire-Fighters: Water may be ineffective for extinguishment, unless used under favorable conditions. Material is volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and ignited by pilot lights, flames, sparks, heaters, smoking, electric motors, static discharge or other ignition sources at locations near the material handling point. Use water spray to cool fire exposed containers and structures if this can be done with minimal risk. Avoid spreading burning material with water used for cooling purposes.

6. ACCIDENTAL RELEASE MEASURES

Protective Equipment: Recommended to wear chemical splash goggles & gloves and discard of gloves that show tears, pinholes, or signs of wear. Wear proper garments to reduce skin exposure, such as long-sleeves and pants.

Personal Precautions: Persons not wearing proper PPE should be excluded from the area of contamination until clean-up has been completed.

Environmental Precautions: Do not allow discharge into drains, surface waters, or sanitary sewer system. Local authorities should be advised if significant spillages cannot be contained or if material discharges into drains or ground water.

Methods & Materials for Clean-Up: Absorb material with inert materials. Shovel or gather material and place in appropriate container for disposal. Wash spill area thoroughly with plenty of water.
7. HANDLING AND STORAGE

**Handling:** Ground/bond container and receiving equipment. Use explosion-proof electrical/ ventilating/ lighting/ equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear proper PPE when handling this product including protective gloves, chemical splash goggles, and impervious clothing. Regular laundering of contaminated clothing is essential to reduce indirect skin contact with this material.

**Storage:** Store in a cool, well-ventilated area, away from heat and ignition sources as well as from incompatible materials (see below). Keep container tightly closed and store locked up. Keep away from food, drink, and animal foodstuffs.

**Incompatible Materials:** Strong oxidizing agents, Strong reducing agents, Inorganic acids, Halogens

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

**Exposure Limits:**
Exposure Limits have not been established for this product.

**n-Heptane**

<table>
<thead>
<tr>
<th>Standard</th>
<th>CAS # 142-82-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHA</td>
<td>Permissible Exposure Limit (PEL)</td>
</tr>
<tr>
<td></td>
<td>500 ppm (2,000 mg/m³)</td>
</tr>
<tr>
<td>ACGIH</td>
<td>Time Weighted Average (TWA)/(STEL)</td>
</tr>
<tr>
<td></td>
<td>400 ppm/500 ppm</td>
</tr>
<tr>
<td>NIOSH</td>
<td>Recommended Exposure Limit (REL)</td>
</tr>
<tr>
<td></td>
<td>85 ppm (350 mg/m³)</td>
</tr>
</tbody>
</table>

**Carbon Black, amorphous**

<table>
<thead>
<tr>
<th>Standard</th>
<th>CAS # 1333-86-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHA</td>
<td>Permissible Exposure Limit (PEL)</td>
</tr>
<tr>
<td></td>
<td>3.5 mg/m³</td>
</tr>
<tr>
<td>ACGIH</td>
<td>Time Weighted Average (TWA)</td>
</tr>
<tr>
<td></td>
<td>3.5 mg/m³</td>
</tr>
<tr>
<td>NIOSH</td>
<td>Recommended Exposure Limit (REL)</td>
</tr>
<tr>
<td></td>
<td>3.5 mg/m³</td>
</tr>
</tbody>
</table>

**Engineering Controls:** Use product in a well-ventilated area.

**Occupational Exposure Controls:** Ensure adequate ventilation, especially in confined areas. Consider all potential hazards of this material, applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting PPE. Ensure that eyewash stations and safety showers are proximal to the work location. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

**Protective and Hygiene Measures:** Wash hands before breaks and after handling product. When using, do not eat, drink, or smoke. In case of clothes contamination, remove and wash contaminated clothing before re-use.

**Eye Protection:** Recommended to wear splash goggles when there is potential for the exposure of the eyes to the product. Have a suitable eye wash station or bottle nearby in case of splashing into the eyes.

**Hand Protection:** Recommended to wear gloves when using this product, and to discard of gloves that show tears, pinholes, or signs of wear.
Skin Protection: Recommended to wear long-sleeved clothing, pants and proper foot covering in order to minimize direct skin contact with the product. If skin irritation develops, contact your facility health and safety professional or your local safety equipment supplier to determine the proper personal protective equipment for your use.

Respiratory Protection: Although unlikely, a NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be appropriate under certain circumstances or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release or other circumstances where an air-purifying respirator may not provide adequate protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Black Liquid
Odor: Mild
Odor Threshold: No data available
pH: No data available
Melting/Freezing Point: < -103°F (< -75°C)
Boiling point/range: > 158°F (> 70°C)
Flash point (Tag closed cup): 16°F (- 9°C)
Evaporation rate: > 1 n-Butyl Acetate
Flammability: Lower Limit: 1.1% (V) Upper Limit: 6.7% (V)
Vapor pressure: No data available
Relative vapor density: > 3 (Air = 1)
Density: 0.72 g/cm³ (6.04 lb/gal)
Solubility in water: Insoluble
Partition coefficient (n-octanol/water): No data available
Auto-ignition temperature: 433°F (223°C)
Ignition temperature: No data available
Decomposition temperature: No data available
Viscosity (dynamic): No data available

10. STABILITY AND REACTIVITY

Reactivity: No decomposition if stored and applied as directed.

Chemical Stability: Stable under normal conditions.

Possibility of Hazardous Reactions: Will not react under normal conditions.
Conditions to Avoid: Excessive heat, direct sunlight exposure

Incompatible Materials: Strong oxidizing agents, Strong reducing agents, Inorganic acids, Halogens
Hazardous decomposition products: Carbon monoxide, Carbon dioxide

11. TOXICOLOGICAL INFORMATION

Primary Routes of Exposure: Skin contact, Eye contact, Ingestion, Inhalation

Symptoms Related to Physical, Chemical and Toxicological Characteristics: Nausea, irritation of the nose, throat and airways, dizziness, drowsiness, and headache. This substance is an aspiration hazard.

Delayed and Immediate Effects & Chronic Effects from Exposure: This material may lead to central nervous system depression and effects such as dizziness and drowsiness. This substance is classified as a carcinogen as outlined by OSHA and the IARC (see below).

Measures of Toxicity:
Acute toxicities are calculated based on component toxicities.
Mixture: Acute Oral Toxicity: LD_{50} Rat: > 4,500 mg/kg
Acute Dermal Toxicity: No sufficient data available
Acute Inhalation Toxicity: No sufficient data available

n-Heptane CAS # 142-82-5
Acute Oral Toxicity LD_{50} Rat: > 5,000 mg/kg
Acute Dermal Toxicity LD_{50} Rat: > 2,000 mg/kg
Acute Inhalation Toxicity LC_{50} Rat: 103,000 mg/m³

Carbon Black, amorphous CAS # 1333-86-4
Acute Oral Toxicity LD_{50} Rat: > 8,000 mg/kg

Carcinogen Claims:
ACGIH: No; A4 [Not Classifiable], National Toxicology Program (NTP) Report on Carcinogens: No

12. ECOLOGICAL INFORMATION

Eco-toxicity: This substance is expected to be toxic to aquatic organisms with long lasting effects. It is strongly advised that this substance does not enter the environment. Local authorities should be advised if significant spillages cannot be contained or if material discharges into drains or ground water.

n-Heptane CAS # 142-82-5
Toxicity to Fish LC_{50} = 4.0 mg/l (Goldfish; 24 h)
LC_{50} = 375 mg/l (Tilapia; 96 h)
Toxicity to Daphnia EC_{50} = 1.5 mg/l (Water flea; 48 h)
Safety Data Sheet
REMA Tire Repair Materials
Product #s: 16 RBS 5G, 16 RBS D

SDS #: RTT-TRM-004  Rev. # 4  Rev. Date: 2/22/2017

Carbon Black, amorphous  CAS # 1333-86-4
  Toxicity to Fish  LC50 > 1,000 mg/l (Zebra Fish; 96 h)
  Toxicity to Daphnia  EC50 > 5,600 mg/l (Water flea; 24 h)
  Toxicity to Algae  EC50 > 10,000 mg/l (Green Algae; 72 h)

Persistence & Degradability: No data available; Substance is readily biodegradable.
Bio-accumulative Potential: No data available
Mobility in Soil: No data available
Other Adverse Effects: No data available

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with Federal, State or Local regulations.
Contaminated packaging should be emptied as far as possible before disposal.

14. TRANSPORT INFORMATION

DOT SHIPPING CLASSIFICATION:
UN NUMBER: UN1133
PROPER SHIPPING NAME: Adhesives, containing a flammable liquid (n-Heptane)
TRANSPORTATION HAZARD CLASS: 3
PACKING GROUP: II
HAZARD LABEL: 3

IMDG (Marine) SHIPPING CLASSIFICATION:
IMDG CODE: 3
UN NUMBER: UN1133
MARINE POLLUTANT: Yes
EmS: F-E, S-D
IMDG PACKING GROUP: II
HAZARD LABEL: 3
Description of the goods
ADHESIVES, CONTAINING A FLAMMABLE LIQUID (N-HEPTANE)

IATA (Air) SHIPPING CLASSIFICATION:
ICAO/IATA-DGR: 3
UN NUMBER: UN1133
HAZARD LABEL: 3
Description of the goods
Adhesives, containing a flammable liquid (n-Heptane)
15. REGULATORY INFORMATION

All components of this product conform to the following national inventory requirements. US TSCA, EU EINECS and Canada DSL

SARA Title III

Section 302 – Extremely Hazardous Chemicals
The following ingredients are subject to the supplier notification requirements of Section 302 of the Superfund Amendments and Reauthorization Act (SARA/EPCRA) and the requirements of 40 CFR Part 37 None Listed

Section 313 – Toxic Chemicals
The following ingredients are subject to the supplier notification requirements of Section 313 of the Superfund Amendments and Reauthorization Act (SARA/EPCRA) and the requirements of 40 CFR Part None Listed

OTHER FEDERAL REGULATIONS

Components of this product are subject to RCRA Hazardous Waste requirements. Clean Air Act (CAA) Hazardous Air Pollutants requirements and OSHA Process Safety Management (PSM) high hazard requirements.

CANADIAN REGULATIONS

WHMIS Classification: Same as OSHA GHS Classification

STATE REGULATIONS

California Proposition 65
This product does not contain materials known to the state of California to cause cancer, birth defects, and other reproductive harm.

California Hazardous Substances List/Permissible Exposure List
California Toxic air contaminants
Connecticut Permissible Exposure Limits
Delaware List of Chemicals and RQs
Hawaii Permissible Exposure Limits
Idaho Toxic Air Pollutants
Illinois Toxic Air Contaminants List
Louisiana Toxic Air Pollutants
Maine Hazardous Air Pollutants
Maryland Toxic Air Pollutants for Existing Sources
Massachusetts Hazardous Substances List
Michigan Permissible Exposure Limits
Minnesota Hazardous Substances
Minnesota Permissible Exposure Limits
Nebraska Hazardous Air Pollutants
New Jersey RTK Hazardous Substances List/TCPA Extremely Hazardous Substances List
New York List of Hazardous Substances
Ohio Toxic Air Contaminants
Oklahoma Toxic Air Contaminants
North Carolina TAP Emissions Rates Requiring a Permit
Pennsylvania Hazardous Substances List
Rhode Island Toxic Air Contaminants
Tennessee Permissible Exposure Limits
Vermont Hazardous Air Contaminants/Permissible Exposure Limits
Washington Permissible Exposure Limits for Airborne Contaminants.
West Virginia Toxic Air Pollutant List
Wisconsin hazardous Air Contaminants

Note: Entries under Section 15 are not intended to be all inclusive of Federal and State laws and regulations. Please consult the appropriate agencies for further clarification of any requirements.

16. OTHER INFORMATION

This SDS conforms to the OSHA Hazard Communication Standard 1910.1200 published in the Federal Register March 26, 2012

MEDICAL EMERGENCIES: FOR ANY OTHER INFORMATION:

Call CHEMTREC 24 hours a day for emergency information
800-424-9300

REMA TIP TOP/NORTH AMERICA, INC.
240 Pegasus Avenue, 2nd floor
NORTHVALE, NJ 07647
201-256-8200

NOTICE: REMA TIP TOP NORTH AMERICA believes that the information contained on this safety data sheet is accurate. The suggested procedures are based on experience as of the date of publication. They are not necessarily all-inclusive, nor fully adequate in every circumstance. Also, the suggestions should not be confused with, nor followed in violation of, applicable laws, regulations, rules or insurance requirements.

NO WARRANTY IS MADE, EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE.