SAFETY DATA SHEET

MA440 ACTIVATOR FOR ADHESIVE

Section 1. Identification of the substance/mixture and of the company/undertaking

Product Name: MA440 Activator for Adhesive
Supplier: CSNRI | 621 Lockhaven Drive. Houston, TX 77073 | +1 281.590.8491
Emergency Phone Number: 800.424.9300 (CHEMTREC)
+1 703.741.5970 (Outside the US)
Product Description: Resin activator
Product Use: For industrial purposes only.
Chemical Name or Synonym: CS/CSM-320

Section 2. Hazards identification

Classification of the substance or mixture
Self-reactive substance and mixtures – Type F
Skin Sensitization – Category 1

Label Elements:

Signal word: Warning

Hazard statements:
H242 - Heating may cause a fire.
H317 - May cause an allergic skin reaction.

Precautionary statement:
P210 - Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
P234 - Keep only in original container.
P235 - Keep cool.
P240 - Ground/Bond container and receiving equipment.
P261 - Avoid breathing dust/fume / gas / mist / vapours / spray.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 - IF ON SKIN: Wash with plenty of water.
P321 - P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P370+P378 - In case of fire: Use dry chemical, carbon dioxide to extinguish small fires. Use water for
P403 - Store in a well-ventilated place.
P410 - Protect from sunlight.
P501 - Dispose of contents/container in accordance with Local, State, Federal and Provincial regulations.

Other information: None known

Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dibutyl maleate</td>
<td>105-76-0</td>
<td>25 – 45</td>
</tr>
</tbody>
</table>
Section 4. First Aid Measures

First Aid Measures for Accidental:

**Ingestion:** If swallowed, do not induce vomiting unless directed to do so by a physician. Never give anything by mouth to an unconscious person. If unconscious place in a recovery position and get medical help immediately.

**Inhalation:** Remove to fresh air. If symptoms persist, seek medical attention. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

**Skin Contact:** Flush contaminated skin with plenty of soap and water for 15 to 20 minutes, remove contaminated shoes and clothing. Wash contaminated clothing thoroughly with water before removing it or wear gloves. Consult physician if symptoms develop.

**Eye Contact:** Flush with plenty of water for at least 15 to 20 minutes or until chemical has been removed. Check for and remove any contact lenses. If symptoms persist, seek medical attention.

**Most important symptoms/effects, acute and delayed**: 

**Ingestion:** Causes irritation, a burning sensation of the mouth, throat and gastrointestinal tract and abdominal pain.

**Inhalation:** Respiratory tract irritant. High concentration may cause dizziness, headache, and anesthetic effects.

**Skin:** Can cause skin irritation; itching, redness, rashes, hives, burning, and swelling. Allergic reactions are possible. May cause skin sensitization, an allergic reaction, which becomes evident on re exposure to this material.

**Eye:** Can cause moderate irritation, burning sensation, tearing, redness, and swelling. Over exposure may cause lacrimation, conjunctivitis, corneal damage and permanent injury.

**Indication of immediate medical attention and special treatment needed:** Treat symptomatically.

Section 5. Fire Fighting Measures

**Suitable extinguishing media:** Dry chemical or carbon dioxide.

**Unsuitable extinguishing media:** No data available

**Special hazards arising from the substance or mixture:** Sudden reaction and fire may result if product is mixed with an oxidizing agent.

**Hazardous Decomposition Materials (Under Fire Conditions):** Organic peroxides can decompose violently if heated strongly while confined.

**Special Protective Equipment and Precautions for Fire Fighters:** As in any fire, wear Self-Contained Breathing Apparatus (SC BA), MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6. Accidental Release Measures

**Personal Precautions, Protective Equipment and Emergency Procedures:** Exclude sources of ignition and ventilate the area. Refer to protective measures listed in sections 7 and 8. Wear approved respirator. Wear proper personal protective equipment. Remove any sources of ignition from the area and allow hot surfaces to cool.

**Environmental precautions:** Use appropriate containment to avoid environmental contamination. Do not allow to penetrate into soil, waterbodies or drains.

**Methods and materials for containment and cleaning up:** Absorb spill with inert material (e.g: dry sand, or earth), then place in a chemical waste container. After removal, flush spill area with soap and water to remove trace residue. Avoid personal contact and breathing vapors or mists.
Section 7. Handling and Storage

Precautions for safe handling: Provide adequate ventilation, and local exhaust as needed. Avoid contact with skin and exes. Avoid generation of dust. Wear suitable protective clothing and gloves. When using do not eat, drink or smoke. Wash hands before breaks and after work. In case of development of vapors or dust: Do not inhale vapors or dust particles. The use of local exhaust ventilation is recommended.

Conditions for safe storage including any incompatibilities: Keep container tightly closed in a cool, well ventilated place. Store in a dry place. Keep away from heat sources, sparks and open fames. Protect from: UV-radiation/sunlight.

Section 8. Exposure Controls / Personal Protection

Exposure Guidelines:

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH - TWA</th>
<th>OSHA - TWA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dibenzoyl peroxide</td>
<td>TLV: 5mg/m³</td>
<td>PEL: 5mg/m³</td>
</tr>
</tbody>
</table>

Appropriate engineering controls: Provide adequate ventilation. In case of development of vapors or dust: The use of local exhaust ventilation is recommended.

Personal protective equipment

Hygiene measures: Avoid contact with skin. Wash hands before eating, smoking or using the lavatory. Appropriate techniques should be used for removal of potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

Respiratory Protection: A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister maybe permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

Eye / Face Protection: Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.


Environmental exposure controls: Do not allow material to contaminate ground water system.

Section 9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance (color):</td>
<td>Paste, blue</td>
</tr>
<tr>
<td>Odour:</td>
<td>Slight odor</td>
</tr>
<tr>
<td>Odour threshold:</td>
<td>No data available</td>
</tr>
<tr>
<td>pH:</td>
<td>Neutral</td>
</tr>
<tr>
<td>Melting point range:</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Initial Boiling point/boiling range:</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash Point:</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate:</td>
<td>&lt;1 (butyl acetate = 1)</td>
</tr>
<tr>
<td>Percent volatile:</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Flammability (solid, gas):</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits:</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure:</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
Vapour density: Not applicable
Relative density: Not applicable
Specific gravity: 1.08
Solubility in water: Slightly soluble
Partition coefficient (n-octanol/water): Not applicable
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Viscosity: No data available
Explosive properties: No data available
Oxidizing properties: No data available
VOC Content: 0 g/L
Other information:
Percent solids by weight: 99

Section 10. Stability and Reactivity

Reactivity: Hazardous polymerization may occur
Chemical stability: Unstable
Possibility of hazardous reactions: Hazardous polymerization is not reported.
Conditions to avoid: Extreme heat, sparks, and open flame. Incompatible materials, oxidizers, and oxidizing conditions. Contamination, direct sunlight, friction, and prolonged storage above 100°F (38°C).
Incompatible materials: Oxidizing agents. Strong acids and alkalis.
Hazardous decomposition products: Organic peroxides can decompose violently if heated strongly while confined.

Section 11. Toxicological Information

Information on toxicological effects:
Dibutyl maleate:
   Skin: Administration onto the skin - Rabbit LD50 - Lethal dose, 50 percent kill: 10 gm/kg [Details of toxic effects not reported other than lethal dose value] (RTECS).
   Ingestion: Oral - Rat LD50 - Lethal dose, 50 percent kill: 3700 mg/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)
Dibenzoyl peroxide:
   Eye: Administration into the eye - Rabbit Standard Draize test: 500 m g/24H [Mild] (RTECS).
   Ingestion: Oral - Rat LD50 - Lethal dose, 50 percent kill: 7710 mg/kg [Lungs, Thorax, or Respiration - Cyanosis Liver - Other changes Kidney/Ureter/Bladder - Other changes in urine composition]
   Oral - Rat D50 - Lethal dose, 50 percent kill: 6400 mg/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

Target Organs: Eyes, skin, respiratory system, digestive system.
Acute toxicity (dermal): No data available
Acute toxicity (inhalative): No data available
Sensitization: Skin sensitization
Chronic Effects: No data available
Mutagenicity: No data available.
Carcinogenicity: No data available.
Tetra
genicity: No data available.
Specific Target Organ Toxicity - single exposure (STOT-se): No data available.
Specific Target Organ Toxicity - repeated exposure (STOT-re): No data available.
Chronic Health Effects: Prolonged skin contact may lead to burning associated with severe reddening, swelling, and possible tissue destruction.
Aggravation of pre-existing conditions: Individuals with pre-existing skin disorders, asthma, allergies or known sensitization may be more susceptible to the effects of this product.
Delayed and immediate effects and also chronic effects from short and long-term exposure: Over exposure can cause headaches, dizziness, nausea, and vomiting.
Numerical measures of toxicity: No data available.

Section 12. Ecological Information

Aquatic toxicity: No data available
Mobility in soil: No data available
Persistence and degradability: data available

Section 13. Disposal Considerations

Waste treatment methods: Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal.
Uncleaned packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal.

Section 14. Transport Information

USA: Department of Transportation (DOT)
Proper shipping name: Not regulated
UN number: Not applicable
Hazard Class: Not applicable
Packing group: Not applicable

Section 15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture:
TSCA Inventory: All ingredients are listed
Canada DSL: All ingredients are listed
Canadian Regulations: WHMIS Hazard Class: 2B
All components of this product are on the Canadian Domestic Substance List.

Section 16. Other Information

HMIS Ratings:
HMIS Health Hazard: 1
HMIS Fire Hazard: 2
HMIS Reactivity: 3
Key Legend Information:
IMDG: International Maritime Code for Dangerous Goods
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