Daratak® B

Owensboro Specialty Polymers, Inc.
5529 US 60 East
Owensboro, KY 42303
USA
www.onssp.com

MATERIAL SAFETY DATA SHEET

Revision Date: December 1, 2012
Rev.: 5.0

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

SUPPLIER NAME: Owensboro Specialty Polymers, Inc.
SUPPLIER ADDRESS: 5529 US 60 E., Owensboro, KY 42303 USA
GENERAL INFORMATION: 1-877-358-0703 Monday –Friday 8am-4pm Central Time Zone (toll free in US)
E-mail: info@onssp.com
CHEMICAL EMERGENCY: CHEMTREC® 1-800-424-9300

PRODUCT NAME: DARATAK® B
PRODUCT CODE: DKB
CHEMICAL DESCRIPTION: Vinyl acetate-dibutyl maleate polymer dispersion in water
SYNONYMS: 2-Butenedioic acid(Z)-, dibutyl ester, polymer with ethenyl acetate
PRODUCT CAS NUMBER: 25035-90-9
PRODUCT USE: Adhesives

SECTION 2. HAZARDS IDENTIFICATION

CAUTION: A white, milky liquid with a slight vinegar odor. May cause eye irritation. May cause skin irritation. May cause respiratory tract irritation. Possible Cancer Hazard – May cause cancer based on animal data.

HAZARD CLASSIFICATION:
This material is considered hazardous by the OSHA Hazard Communication Standard (29CFR 1910.1200).

RELEVANT ROUTES OF EXPOSURE: Eye contact, skin contact, inhalation

EYE: May cause eye irritation
SKIN: May cause skin irritation
INGESTION: Not determined
INHALATION: May cause respiratory tract irritation
CHRONIC EFFECTS: Possible Cancer Hazard – May cause cancer based on animal data.
Vinyl acetate: IARC (Group 2B) and ACGIH (Group A3).

SIGNS AND SYMPTOMS OF OVEREXPOSURE:
Eyes - tearing, stinging, redness. Skin - stinging, redness, some swelling possible. Coughing, soreness in respiratory tract, chest tightness, difficulty breathing.

CONDITIONS GENERALLY RECOGNIZED AS BEING AGGRAVATED BY EXPOSURE:
Any pre-existing disorders or diseases of the skin, eye, and respiratory system.

We hope the information give herein will be helpful. It is based on our best knowledge and we believe it to be true and accurate. Please read all statements. Recommendations or suggestions herein in conjunction with our conditions of sale which apply to all goods supply by us. We assume no responsibility for the use of these statements, recommendations or suggestions nor do we intend them as a recommendation for any use which would infringe any patent or copyright.
SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Weight Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinyl acetate-dibutyl maleate polymer</td>
<td>25035-90-9</td>
<td>54-56</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>44-46</td>
</tr>
<tr>
<td>Vinyl acetate</td>
<td>108-05-4</td>
<td>&lt;1.0</td>
</tr>
<tr>
<td>Hydrolyzed polyvinyl alcohol</td>
<td>9002-89-5</td>
<td>&gt;1.0</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES

EYE CONTACT: In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately if irritation persists.

SKIN CONTACT: In case of skin contact, flush with plenty of water. Remove contaminated clothing and shoes. Get medical attention if irritation develops and persists.

INGESTION: If swallowed, do NOT induce vomiting unless directed to do so by a physician. Never give anything by mouth to an unconscious person. Rinse mouth thoroughly with water. Get medical attention.

INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

SECTION 5. FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA: Aqueous product. For fires involving dried material use water, carbon dioxide, dry chemicals, or foam.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL: Carbon monoxide and carbon dioxide are the thermal decomposition products.

SPECIAL PROTECTIVE ACTIONS FOR FIRE-FIGHTERS: If product is present in fire and threat of decomposition exists, wear full fire fighting turn-out gear (full Bunker gear) and self-contained breathing apparatus (SCBA) with full-face piece.

NFPA RATINGS (applicable to firefighting situations only): Health 2, Flammability 1, Reactivity 0

SECTION 6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Use personal protection recommended in Section 8.

ENVIRONMENTAL PRECAUTIONS: Prevent spilled product or contaminated wash water from entering drinking water supplies, drains, sewers, ditches, and waterways.
METHODS FOR CONTAINMENT AND CLEANING UP:
Contain liquid spills using a barrier of inert material such as sand or by diking the area. Absorb spilled liquids using an inert material such as sand or earth. Scoop or shovel absorbed material into containers.

OTHER INFORMATION:
Avoid creating dust during transfer of solids.

SECTION 7. HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING:
Avoid contact with eyes, skin, and clothing.
Avoid breathing mist or vapor.
Check protective clothing particularly impervious gloves, for leaks before use.
Wash thoroughly after handling.
Wash contaminated clothes before re-use.
Launder work clothes separately from family clothes.

CONDITIONS FOR SAFE STORAGE:
To protect product quality avoid storage temperature extremes less than 40°F or greater than 100°F.
Keep container tightly closed when not in use.
Use only with adequate ventilation.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL PARAMETERS/EXPOSURE LIMITS:

<table>
<thead>
<tr>
<th>Component(s)</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinyl acetate</td>
<td>10ppm TWA (35 mg/m³ TWA)</td>
<td>not established</td>
</tr>
<tr>
<td></td>
<td>15ppm STEL (53 mg/m³ STEL)</td>
<td></td>
</tr>
</tbody>
</table>

ENGINEERING CONTROLS:
Use exhaust ventilation, if needed, to keep airborne concentrations below exposure limits.
It is recommended that exposure monitoring be part of the decision process.

PERSONAL PROTECTIVE EQUIPMENT (PPE):
Wear safety glasses with side shields (or goggles). Wear chemical splash goggles when eye and face contact is possible due to splashing or spraying of material. Wear impervious gloves to prevent skin contact. Wear chemical resistant clothing, as appropriate, when skin contact is possible due to splashing or spraying of material. A NIOSH-approved air-purifying respirator with an organic vapor cartridge or canister may be required under certain circumstances where airborne concentrations are expected to exceed exposure limits.
**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Milky-white</td>
</tr>
<tr>
<td>Odor</td>
<td>Slight vinegar</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>Vinyl acetate 0.11-0.55 ppm</td>
</tr>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>pH</td>
<td>4.0-5.5</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>~ 0° C (32° F)</td>
</tr>
<tr>
<td>Initial Boiling Point</td>
<td>~100° C (~212° F)</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Aqueous system, not determined</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>~ same as water</td>
</tr>
<tr>
<td>Flammability</td>
<td>Not determined</td>
</tr>
<tr>
<td>Upper/Lower Flammability or Explosive Limits</td>
<td>Not determined</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>~ same as water</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>~ same as water</td>
</tr>
<tr>
<td>Specific Gravity (Water=1)</td>
<td>1.1</td>
</tr>
<tr>
<td>Solubility (IES)</td>
<td>Miscible in water</td>
</tr>
<tr>
<td>Partition Coefficient: N-Octanol/Water</td>
<td>Not determined</td>
</tr>
<tr>
<td>Auto-Ignition Temperature</td>
<td>Not determined</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not determined</td>
</tr>
<tr>
<td>Viscosity</td>
<td>1000-1400 centipoises (Brookfield #3@60rpm)</td>
</tr>
<tr>
<td>% Volatile by Weight</td>
<td>~45% as water</td>
</tr>
</tbody>
</table>

**SECTION 10. STABILITY AND REACTIVITY**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity with Water</td>
<td>None</td>
</tr>
<tr>
<td>Chemical Stability</td>
<td>Stable</td>
</tr>
<tr>
<td>Possibility of Hazardous Reactions</td>
<td>None known</td>
</tr>
<tr>
<td>Conditions to Avoid</td>
<td>None known</td>
</tr>
<tr>
<td>Incompatible Materials</td>
<td>None known</td>
</tr>
<tr>
<td>Hazardous Decomposition Products</td>
<td>Carbon monoxide, carbon dioxide are the thermal decomposition products.</td>
</tr>
</tbody>
</table>

**SECTION 11. TOXICOLOGICAL INFORMATION**

The toxicological properties of this material have not been fully investigated.

**Acute Toxicity:** Polyvinyl alcohol: Oral rat LD50>5000 mg/kg. Practically nontoxic to animals by ingestion.

**Skin Corrosion/Irritation:** May cause skin irritation. Dermal contact with vinyl acetate (108-05-4) may produce irritation with blister formation (IARC 1986).
SERIOUS EYE DAMAGE/IRRITATION: May cause eye irritation. Vinyl acetate monomer (108-05-4) vapors were irritating to the eyes at a concentration of 21.6 ppm (ACGIH 1991).

RESPIRATORY OR SKIN SENSITIZATION: May cause respiratory tract irritation. Volunteers exposed to vinyl acetate monomer (108-05-4) vapors at concentrations ranging from 19.5 to 71.5 ppm for 0.5 to 4 hours reported respiratory tract irritation (ACGIH 1991).

CARCINOGENICITY: Possible cancer hazard by IARC (Group 2B) and ACGIH (Group A3). May cause cancer based on animal data.

GERM CELL MUTAGENICITY: Not available at this time
REPRODUCTIVE TOXICITY: Not available at this time
STOT-SINGLE EXPOSURE: Not available at this time
STOT-REPEATED EXPOSURE: Not available at this time
ASPIRATION HAZARD: Not available at this time

SECTION 12. ECOLOGICAL INFORMATION

The ecological properties of this material have not been fully investigated.

TOXICITY:
- Aquatic Toxicity: Not available at this time
- Terrestrial Toxicity: Not available at this time

PERSISTENCE AND DEGRADABILITY: Not available at this time
BIOACCUMULATIVE POTENTIAL: Not available at this time
MOBILITY IN SOIL: Not available at this time
OTHER ADVERSE EFFECTS: Not available at this time

SECTION 13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD:
This product is not a federal hazardous waste according to U.S. EPA regulation 40 CFR 261. Disposal should be made in accordance with federal, state, and local regulations.

Canada: Dispose of waste in accordance with local, provincial, and national regulations.
SECTION 14. TRANSPORT INFORMATION

U.S. DOT: This product is not a Hazardous Material according to the Hazardous Materials Transportation Act and DOT regulations contained in 49 CFR.

Proper Shipping Name: SYNTHETIC LATEX/LIQUID RUBBER, NMFC: 171720

CANADIAN TDG: Not regulated
IMDG Code: Not restricted
IATA: Not restricted
RID: Not determined
ADR: Not determined

Please refer to the Bill of Lading for the most up to date shipping information for this container size and mode of transport.

SECTION 15. REGULATORY INFORMATION

INTERNATIONAL INVENTORY LISTINGS:

U. S. TSCA INVENTORY: Listed
AUSTRALIAN AICS INVENTORY: Listed
EUROPEAN EINECS INVENTORY: All ingredients conform to the EU requirements.
CANADIAN INVENTORY: Canadian Domestic Substances List
JAPANESE ENCS INVENTORY: Listed
CHINESE IECSC INVENTORY: Listed

U.S. REGULATORY INFORMATION:

SARA (311, 312) HAZARD CLASS: Immediate (acute) health hazard. Delayed (chronic) health hazard.

SARA (313) CHEMICALS - Ingredients present in products that may require reporting under Section 313 of SARA Title III as defined in 40 CFR 372: Vinyl acetate CAS#108-05-4.

CLEAN AIR ACT, OZONE DEPLETING SUBSTANCES: This product does not contain nor was it manufactured with Class I or Class II ozone depleting substances as defined by the Clean Air Act Amendments of 1990.

PENNSYLVANIA RIGHT-TO-KNOW ACT: According to definitions and limitations of the regulation there are no hazardous, special hazardous or environmental hazardous substances present in the product.

CALIFORNIA PROPOSITION 65 Warning Statement: WARNING: This product contains a chemical known to the State of California to cause cancer.

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CANADIAN REGULATORY INFORMATION:

WHMIS HAZARD CLASS AND DIVISION:  Class D Division 2A. Class D Division 2B.

EUROPEAN UNION REGULATORY INFORMATION:

Owensboro Specialty Polymers (OSP) is a non-EU manufacturer. OSP has appointed an only representative (OR) for OSP customers who directly import products from OSP into the EU. Please contact OSP at info@onssp.com for additional information.

The Classification, Labeling and Packaging of Substances and Mixtures (CLP) Regulation (EC 1272/2008):
This product is classified as a hazardous polymer. This product has not been notified under CLP because this product is not commercial in the EU.

Please contact us at info@onssp.com to request additional information on this product, if required.

SECTION 16. OTHER INFORMATION

HMIS:  Health- *2, Flammability - 1, Reactivity - 0, Personal Protective Equipment- B

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