1. PRODUCT IDENTIFICATION

PRODUCT NAME: DARTA® 90L
PRODUCT CODE: DK90L
REVISION DATE: 05/16/00
CHEMICAL DESCRIPTION: Vinyl acetate - dioctyl maleate - 2-ethylhexyl acrylate polymer dispersion in water.
SYNONYMS: None.
PRODUCT CAS NUMBER: 25280-35-7
PRODUCT USE: Packaging adhesives.

2. COMPONENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS Number</th>
<th>Weight Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinyl acetate-dioctyl maleate-2-ethylhexyl acrylate</td>
<td>25280-35-7</td>
<td>~52</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>~45</td>
</tr>
<tr>
<td>Vinyl acetate</td>
<td>108-05-4</td>
<td>~1</td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>75-07-0</td>
<td>330-1800 PPM</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

A white, milky liquid with a slight vinegar odor. May cause skin irritation. May cause eye irritation. Vinyl acetate monomer can cause eye and respiratory irritation at high air concentrations.
HEALTH EFFECTS (Acute and Chronic):
May cause eye irritation. May cause skin irritation. Vinyl acetate monomer can cause eye and respiratory irritation at high air concentrations.

CARCINOGENICITY: Vinyl acetate is listed by IARC as a suspect carcinogen based on animal studies. Acetaldehyde is listed by NTP and IARC as a suspect carcinogen based on animal studies.


CONDITIONS GENERALLY RECOGNIZED AS BEING AGGRAVATED BY EXPOSURE: Dermal ailments. Respiratory ailments.

SYNERGISTIC EFFECTS: Effects that are more serious for simultaneous exposure to two or more chemicals than for separate exposures to the individual chemicals: None known.

ODOR THRESHOLDS/Warning Properties: Vinyl acetate: about 0.55ppm.

USUAL METHOD(S) OF CONTACT: Eye contact. Inhalation. Skin contact.

PRIMARY ROUTE(S) OF ENTRY INTO THE BODY: Inhalation of mist.

4. FIRST AID MEASURES

EYE CONTACT: Immediately flush eyes with large quantities of water. Contact a physician immediately.

SKIN CONTACT: For skin contact, immediately remove contaminated clothing and flush area with large quantities of water. Contact a physician if irritation develops.

INGESTION: If swallowed, do not induce vomiting. If patient is conscious, give several glasses of water for dilution effect and contact a physician. Do not give an unconscious person anything by mouth.

INHALATION: If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult give oxygen. Contact a physician.

NOTE TO PHYSICIAN: None.
5. FIRE FIGHTING MEASURES

**FLASH POINT:** Aqueous system  **METHOD:** Not determined.
**LOWER EXPLOSION LIMIT:** Not determined.  **UPPER EXPLOSION LIMIT:** Not determined.
**MINIMUM IGNITION TEMP:** Not determined.

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

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** None known.

**THERMAL DECOMPOSITION PRODUCTS:** Carbon monoxide. Carbon dioxide.

**FIRE FIGHTING GUIDANCE:** If product is present in fire and threat of decomposition exists, wear self contained breathing apparatus (SCBA) with full-face piece.

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

6. ACCIDENTAL RELEASE MEASURES

**SPILL AND RELEASE PROCEDURE:** Use protective equipment and respiratory protection stated in Section Eight. Contain liquid spills using a barrier of inert material such as sand or by diking the area. Absorb spilled liquids using an inert material. Scoop or shovel absorbed material into containers. Avoid creating a dust during transfer of solids. Prevent spilled product or contaminated wash water from entering drinking water supplies or streams.

7. HANDLING AND STORAGE

**WORK/HYGIENIC PRACTICES:** Wash thoroughly after handling. Wash contaminated clothes before re-use. Check protective clothing, particularly impervious gloves, for leaks before use. Launder work clothes separately from family clothes.

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:** Avoid contact with eyes, skin and clothing. To protect product quality, avoid storage temperature extremes less than 40° F or greater than 100° F. Keep container closed when not in use. Do not enter storage area unless area is adequately ventilated.
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION: If necessary to control exposures, hoods or local exhaust ventilation is recommended to supplement mechanical or general industrial ventilation. Dilution ventilation is not recommended as the sole control mechanism.

PROTECTIVE EQUIPMENT: Goggles, impervious gloves and impervious clothing to prevent skin contact.

RESPIRATORY PROTECTION: Use an organic vapor respirator. If a mist is present, add a prefilter for mist.

EXPOSURE LIMITS:

<table>
<thead>
<tr>
<th>Component(s)</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinyl acetate</td>
<td>35 mg/m³ TWA</td>
<td>10 ppm TWA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>53 mg/m³ STEL</td>
<td>15 ppm STEL</td>
<td></td>
</tr>
<tr>
<td>Acetaldehyde</td>
<td>45 mg/m³ CEIL</td>
<td>360 mg/m³ TWA</td>
<td>2000 ppm [Ca]</td>
</tr>
<tr>
<td></td>
<td>25 ppm CEIL</td>
<td>200 ppm TWA</td>
<td></td>
</tr>
</tbody>
</table>

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: LIQUID. COLOR: MILKY-WHITE ODOR: SLIGHT VINEGAR
BOILING POINT: ~100 °C (~212 °F). BULK DENSITY: Not determined.
FREEZING POINT: Not determined. SPECIFIC GRAVITY (WATER=1): ~1.0
MELTING POINT: Not applicable. % VOLATILE BY WEIGHT: ~45% as water.
VAPOR PRESSURE: ~ same as water. EVAPORATION RATE: ~ same as water.
VAPOR DENSITY: ~ same as water. pH: 4.5 – 5.5 (may lower during storage)
O/W PARTITION COEFFICIENT: Not determined.
WATER SOLUBILITY: MISCIBLE
10. STABILITY AND REACTIVITY

STABILITY: Stable.
HAZARDOUS POLYMERIZATION: Will not occur.
CONDITIONS TO AVOID: None known.
SENSITIVITY TO STATIC DISCHARGE: Sensitivity to static discharge is not expected.
REACTIVITY WITH WATER: None.
INCOMPATIBILITY WITH OTHER MATERIALS: None known.
REACTION DECOMPOSITION PRODUCTS: None.

11. TOXICOLOGICAL INFORMATION

(TF numbers are internal company file numbers.)

Not available at this time.

12. ECOLOGICAL AND ENVIRONMENTAL FATE INFORMATION

(TF numbers are internal company file numbers.)

Not available at this time.

13. DISPOSAL CONSIDERATIONS

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

Disposal should be made in accordance with federal, state and local regulations. Waste latex contains trace amounts of the following substances that are regulated by the Toxic Characteristic Leachate Procedure and/or Land Disposal Restrictions. Refer to 40 CFR Part 261 and Part 268 before disposal of wastes containing these products: Acetaldehyde.

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

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

CANADIAN TDG DESCRIPTION (ROAD & RAIL): Not regulated.
ADR: Not determined.
IMO/IMDG-code: Not restricted.
IATA: Not restricted.
RID: Not determined.

15. REGULATORY INFORMATION

INTERNATIONAL INVENTORY LISTINGS:

U.S. TSCA INVENTORY: Listed.
AUSTRALIAN AICS INVENTORY: Listed.
EUROPEAN EINECS INVENTORY: Listed (qualifies as a polymer and monomers are listed).
CANADIAN INVENTORY: Canadian Domestic Substances List.
JAPANESE ENCS INVENTORY: Listed.
KOREAN ECL INVENTORY: Not listed.

U.S. REGULATORY INFORMATION:

U.S. HAZARD COMMUNICATION STANDARD Classification: Hazardous.

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//108-05-4. ACETALDEHYDE//75-07-0.

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.

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

CANADIAN REGULATORY INFORMATION:

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

EUROPEAN UNION REGULATORY INFORMATION:

Not available at this time.

16. OTHER INFORMATION

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