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DuPont
Material Safety Data Sheet

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"ELVAX" RESINS ALL IN SYNONYM LIST VAX001
VAX001 Revised 6-JUN-2003

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

"ELVAX" is a registered trademark of DuPont.

Corporate MSDS Number : DU007119

Tradenames and Synonyms

"ELVAX" 410-1, 410, 415, 420, 440, 450,
"ELVAX" 460, 460A, 460B, 460C, 460FW, 460M, 460NF, 460Q, #
"ELVAX" 460R, 460Z, 460Z1, 462, 466, 466M, 470,
"ELVAX" 500W, 550, 550A, 560, 560A,
"ELVAX" 565, 650Q, 660, 660A, 660V, 670, 670-1,
"ELVAX" 670-2, 750, 750A, 750Q, 750Z,
"ELVAX" 760, 760A, 760C, 760Q, 770, 770C, 770M, 880,
"ELVAX" 3120, 3120HS, 3121A, 3121A-1, 3122,
"ELVAX" 3124, 3128, 3128C, 3128HG, 3129, 3129-1, 3130,
"ELVAX" 3130SBZ, 3130SB, 3134Q, 3134SBZ,
"ELVAX" 3135B, 3135SB,
"ELVAX" 3135X, 3135X-1, 3135XS, 3135XZ,
"ELVAX" 3136, 3150, 3152, 3155, 3165, 3165-1,
"ELVAX" 3165D, 3165GH, 3165GS, 3165JR,
"ELVAX" 3165LG, 3165LG-A, 3165SB, 3165Z, 3165Z-1,
"ELVAX" 3168, 3169, 3169Z, 3169Z-1,
"ELVAX" 3170,
"ELVAX" 3170SHB, 3171SHB, 3172, 3172JR-A, 3173SHB,
"ELVAX" 3174, 3174SHB,
"ELVAX" 3176, 3176BF, 3176BFZ, 3176CW-2, 3176CW-3,
"ELVAX" 3176CW-2A, 3176CW-2B,
"ELVAX" 3550SHB, 4036-2, 4036Z, 89253,
"ELVAX" BR770, BR3128, BR3128LG, BR3170Z,
"ELVAX" CE9643, CE9742,
"ELVAX" CE9747, CM4036,
"ELVAX" E-101728-2,
"ELVAX" EP1188, EP2288,
"ELVAX" EP3136AC, EP4036-3, EP4058, EP4062-1,
"ELVAX" EP4062-3, EP4062-4, EP4062-5, EP4062-6,
"ELVAX" EP4062-7, EP4085, EP4090, EP4091,
"ELVAX" EP4112, EP4950, EP4969-5W,
"ELVAX" EP6449Q, ECO4971-7, ECO4971-8,
"ELVAX" F3135SB, PE3507-2, PE3508,

Company Identification

(CHEMICAL PRODUCT/COMPANY IDENTIFICATION - Continued)

MANUFACTURER/DISTRIBUTOR

DuPont Packaging & Industrial Polymers
1007 Market Street
Wilmington, DE 19898

PHONE NUMBERS

Product Information : 1-(800)-441-7515
Transport Emergency : 1-(800)-424-9300
Medical Emergency : 1-(800)-441-3637

COMPOSITION/INFORMATION ON INGREDIENTS

Components

Material	CAS Number	%
ETHYLENE-VINYL ACETATE COPOLYMER		>99
VINYL ACETATE	108-05-4	<0.1
PROCESS AIDS		0-0.5

Components (Remarks)

Material is not known to contain Toxic Chemicals under Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR part 372.

HAZARDS IDENTIFICATION

Potential Health Effects

ADDITIONAL HEALTH EFFECTS

Before using "ELVAX" Resins, read the brochures on the safe handling procedures.

ACUTE OR IMMEDIATE EFFECTS: ROUTES OF ENTRY AND SYMPTOMS

INGESTION The oral LD-50 in rats using one type of "ELVAX" is in excess of 1000 milligrams per kilogram of body weight. Two week metabolic tests with dogs and rats showed that no significant amount of polymer was retained by the animals. 90-day feeding studies in rats showed that "ELVAX" resins have low toxicity. Slight liver effects were seen in animals fed diets containing 10% "ELVAX"; no effects were seen with diets containing 5% "ELVAX". Overall, no important body systems or organ dysfunction occurred at either dose level.

SKIN No data are available. However, based on experience with handling these polymers, no unusual dermatitis hazard is expected from routine handling. Molten polymer contacting the skin will cause thermal burns.

EYE Mechanical irritation.

(HAZARDS IDENTIFICATION - Continued)

INHALATION Polymer is not respirable as marketed. At processing temperatures above 204 degrees C, fumes irritating to the eye, nose, and throat may be produced. Exposure may result in redness, tearing, and itching in the eyes together with soreness in the nose and throat with coughing.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: None known.

Carcinogenicity Information

The following components are listed by IARC, NTP, OSHA or ACGIH as carcinogens.

Material	IARC	NTP	OSHA	ACGIH
VINYL ACETATE	2B			A3

FIRST AID MEASURES

First Aid

INHALATION

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

SKIN CONTACT

The compound is not likely to be hazardous by skin contact but cleansing the skin after use is advisable. If molten material gets on skin, cool rapidly with cold water. Do not attempt to remove material from skin. Obtain medical treatment for thermal burn.

EYE CONTACT

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

INGESTION

No specific intervention is indicated as compound is not likely to be hazardous by ingestion. Consult a physician if necessary.

FIRE FIGHTING MEASURES

Flammable Properties

Flash Point : 260 C (500 F) Cleveland
Method : open cup

Fire and Explosion Hazards:

UNUSUAL FIRE, EXPLOSION HAZARDS The solid polymer can be combusted only with difficulty. An electrostatic charge can potentially build up when pouring pellets. Grounding of equipment is recommended.

HAZARDOUS COMBUSTION PRODUCTS Complete combustion gives carbon dioxide and water. Incomplete combustion gives, in addition, vinyl acetate, acetic acid, carbon monoxide and hydrocarbon oxidation products including organic acids, aldehydes, acrolein, and alcohols, oxides of nitrogen.

Extinguishing Media

Water, Foam, Dry Chemical, CO2.

Fire Fighting Instructions

Wear self-contained breathing apparatus.

ACCIDENTAL RELEASE MEASURES

Safeguards (Personnel)

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

Spill Clean Up

Shovel or sweep up.

HANDLING AND STORAGE

Handling (Personnel)

See FIRST AID and PERSONAL PROTECTIVE EQUIPMENT SECTIONS.

Storage

Store in a cool, dry place. Keep container closed to prevent contamination.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

VENTILATION Local ventilation must be used over processing equipment to maintain vinyl acetate concentrations in air below the PEL.

Use static controls. Static charges can build up and ignite dust or solvent laden atmospheres.

Personal Protective Equipment

EYE/FACE PROTECTION

Wear safety glasses. Wear coverall chemical splash goggles and face shield when possibility exists for eye and face contact due to splashing or spraying of molten material.

RESPIRATORS

A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge with a dust/mist filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. 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.

PROTECTIVE CLOTHING

If there is potential contact with hot/molten material, wear heat resistant clothing and footwear.

Exposure Guidelines

Exposure Limits

"ELVAX" RESINS ALL IN SYNONYM LIST VAX001
PEL (OSHA) : Particulates (Not Otherwise Regulated)
15 mg/m³, 8 Hr. TWA, total dust
5 mg/m³, 8 Hr. TWA, respirable dust

Other Applicable Exposure Limits

VINYL ACETATE
PEL (OSHA) : None Established
TLV (ACGIH) : 10 ppm, 35 mg/m³, 8 Hr. TWA, A3
STEL 15 ppm, 53 mg/m³, A3
AEL * (DuPont) : 10 ppm, 8 & 12 Hr. TWA

* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

PHYSICAL AND CHEMICAL PROPERTIES

Physical Data

Melting Point : NA
% Volatiles : Negligible
Solubility in Water : Negligible
Odor : Mild ester-like
Form : Pellets
Color : Translucent to white
Specific Gravity : 0.93-0.97

STABILITY AND REACTIVITY

Chemical Stability

Stable at normal temperatures and storage conditions.

Conditions to Avoid

Temperatures above 230 degrees C for short residence times.
Temperatures above 204 degrees C for long residence times.

Incompatibility with Other Materials

Incompatible or can react with strong acids, oxidizing agents.

Decomposition

HAZARDOUS DECOMPOSITION PRODUCTS - vinyl acetate, acetic acid, carbon monoxide, and, hydrocarbon oxidation products including, organic acids, aldehydes, acrolein, and, alcohols, oxides of nitrogen.

Polymerization

Polymerization will not occur.

TOXICOLOGICAL INFORMATION

Animal Data

VINYL ACETATE

Inhalation 4 hour LC50: 4000 ppm in rats
Skin absorption LD50: 2335 mg/kg in rabbits
Oral LD50: 2920 mg/kg in rats

(TOXICOLOGICAL INFORMATION - Continued)

Vinyl Acetate is a slight skin and a severe eye irritant, and a weak skin sensitizer in animals. No effects from repeated exposure to Vinyl Acetate by inhalation were observed at 100 ppm in rats. Exposure to higher concentrations of Vinyl Acetate by inhalation caused eye irritation and lacrimation, reduced weight gain, and irritation of the respiratory tract with breathing difficulty. The effects observed in rats and mice exposed by inhalation to 200 and 600 ppm for two years include reduced body weight, and pathological changes in the nose and respiratory tract. Nasal cavity tumors were observed in rats but not in mice. Research on the mechanism of nasal tumor induction in rats suggests that levels at which humans are likely to be exposed are below the threshold for effects that contribute to tumor formation.

Vinyl Acetate is not a developmental toxin in animals. The effect of Vinyl Acetate on reproduction in animals is not considered significant. Genetic damage was produced in some types of cell cultures and in animals, but was negative in other studies. No tests for heritable genetic damage were available.

ECOLOGICAL INFORMATION-----
Ecotoxicological Information

AQUATIC TOXICITY:

No information is available. Toxicity is expected to be low based on insolubility in water.

DISPOSAL CONSIDERATIONS-----
Waste Disposal

Preferred options for disposal are (1) recycling, (2) incineration with energy recovery, and (3) landfill. The high fuel value of this product makes option 2 very desirable for material that cannot be recycled. Treatment, storage, transportation, and disposal must be in accordance with applicable federal, state/provincial, and local regulations.

TRANSPORTATION INFORMATION-----
Shipping Information

DOT
Hazard Class : Not regulated

REGULATORY INFORMATION

U.S. Federal Regulations

TSCA Inventory Status : In compliance with TSCA Inventory requirements for commercial purposes.

State Regulations (U.S.)

STATE RIGHT-TO-KNOW LAWS

No substances on the state hazardous substances list, for the states indicated below, are used in the manufacture of products on this Material Safety Data Sheet.

SUBSTANCES ON THE PENNSYLVANIA HAZARDOUS SUBSTANCES LIST PRESENT AT A CONCENTRATION OF 1% OR MORE (0.01% FOR SPECIAL HAZARDOUS SUBSTANCES): None known.

WARNING: SUBSTANCES KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM: None known.

SUBSTANCES ON THE NEW JERSEY WORKPLACE HAZARDOUS SUBSTANCE LIST PRESENT AT A CONCENTRATION OF 1 % OR MORE (0.1% FOR SUBSTANCES IDENTIFIED AS CARCINOGENS, MUTAGENS OR TERATOGENS): None known.

OTHER INFORMATION

Additional Information

MEDICAL USE: CAUTION: Do not use in medical applications involving permanent implantation in the human body. For other medical applications see DuPont CAUTION Bulletin No. H-50102.

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Responsibility for MSDS : T. P. PRICE
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WILMINGTON, DE 19880-0713
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Indicates updated section.

This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.

End of MSDS