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# **Material Safety Data Sheet**

## **Delrin**

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DuPont Polymers

## **“DELTRIN” II ACETAL RESIN ALL IN SYNONYM LIST DEL019**

### **CHEMICAL PRODUCT/COMPANY IDENTIFICATION**

#### **Material Identification**

"DELTRIN" is a registered trademark of DuPont  
Corporate MSDS Number DU001842

#### **Tradenames and Synonyms**

"DELTRIN" II 100 NC010,  
"DELTRIN" II 150E NC010, 150E NC010A, 150SA NC010,  
"DELTRIN" II 500SA NC010, 900 NC010, 900F NC010,  
"DELTRIN" II 1700 NC010,  
"DELTRIN" II DE9206 NC010,  
"DELTRIN" II DE9385 NC010, DE9386 NC010,  
"DELTRIN" II DE9442 NC010, DE9447 NC010

#### **Company Identification**

##### **MANUFACTURER/DISTRIBUTOR**

DUPONT ENGINEERING 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	%
POLYOXYMETHYLENE HOMOPOLYMER	25231-38-3	>97
ANTIOXIDANT		<0.2
STABILIZERS		< 2
LUBRICANT (IN F TYPES ONLY)		1
FORMALDEHYDE	50-00-0	<0.005

**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

**Carcinogenicity Information**

The following components are listed by IARC, NTP, OSHA or ACGIH as carcinogens. A "P" indicates a proposed carcinogen.

Material	IARC	NTP	OSHA	ACGIH
FORMALDEHYDE	X	X	X	X

## FIRST AID MEASURES

**First Aid****INHALATION**

No specific intervention is indicated as the compound is not likely to be hazardous by inhalation. Consult a physician if necessary. If exposed to fumes from overheating or combustion move to fresh air. Consult a physician if symptoms persist.

**SKIN CONTACT**

The compound is not likely to be hazardous by skin contact, but cleansing the skin after use is advisable. If molten polymer gets on skin, cool rapidly with cold water. Do not attempt to peel polymer 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 322 C (612 F) ASTM 1929-62

"Delrin" dust cloud ignition temperature is 440 degrees C (824 degrees F).

Burns with invisible flame. Hazardous gases/vapors produced in fire are carbon monoxide and formaldehyde.

**Extinguishing Media**

Water, Foam, Dry Chemical, CO2.

**Fire Fighting Instructions**

Keep personnel removed and upwind of fire. Use 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

Recover undamaged and minimally contaminated material for reuse and reclamation. Shovel or sweep up.

## HANDLING AND STORAGE

### Handling (Personnel)

See FIRST AID and PERSONAL PROTECTIVE EQUIPMENT SECTIONS.

### Storage

Dry storage. Keep container closed to prevent contamination.

Open containers only in a well ventilated area.

## EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Controls** Use sufficient ventilation to keep employee exposure below recommended limits.

### 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

When temperatures exceed 230 degrees C and ventilation is inadequate to maintain concentrations below exposure limits, use a positive pressure air supplied respirator. 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

"DELFIN" II ACETAL RESIN ALL IN SYNONYM LIST DEL019

PEL (OSHA)	Particulates (Not Otherwise Regulated)
	15 mg/m <sup>3</sup> , 8 Hr. TWA, total dust
	5 mg/m <sup>3</sup> , 8 Hr. TWA, respirable dust

#### Other Applicable Exposure Limits

POLYOXYMETHYLENE HOMOPOLYMER

PEL (OSHA)	None Established
TLV (ACGIH)	None Established
AEL * (DuPont)	10 mg/m <sup>3</sup> , 8 Hr. TWA, total dust
	5 mg/m <sup>3</sup> , 8 Hr. TWA, respirable dust

#### FORMALDEHYDE

PEL (OSHA)	0.75 ppm, 0.92 mg/m <sup>3</sup> , 8 Hr. TWA STEL 2 ppm, 2.5 mg/m <sup>3</sup>
TLV (ACGIH)	Ceiling 0.3 ppm, 0.37 mg/m <sup>3</sup> , A2
AEL * (DuPont)	1 ppm, 8 & 12 Hr. TWA 2 ppm, 15 minute 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	172-184 C (342-363 F)
% Volatiles	NA
Solubility in Water	Insoluble
Odor	Slight formaldehyde
Form	Granules or powder
Specific Gravity	1.42

## STABILITY AND REACTIVITY

### Chemical Stability

Stable at normal temperatures and storage conditions.

### Incompatibility with Other Materials

Incompatible with strong acids and bases (decomposes forming formaldehyde) and strong oxidizing agents. At melt temperatures, acetal resins are incompatible with halogenated polymers such as PVC and PVDC.

### Decomposition

Hazardous gases/vapors produced are formaldehyde.

### Polymerization

Polymerization will not occur.

## ECOLOGICAL INFORMATION

### Ecotoxicological Information

No information 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	
Proper Shipping Name	NA
Hazard Class	Not regulated

## REGULATORY INFORMATION

**U.S. Federal Regulations**

TSCA Inventory Status        Listed.

**State Regulations (U.S.)**

STATE RIGHT-TO-KNOW

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, with the exceptions indicated.

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- Formaldehyde

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**

**NFPA, NPCA-HMIS**

NFPA Rating	
Health	1
Flammability	1
Reactivity	0

**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	J. P. BOLLMEIER
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