

WRBGS FILL CRUSTER  
BLUE/WHITE END

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DuPont  
Material Safety Data Sheet

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"DELRIN" ACETAL RESIN ALL IN SYNONYM LIST DEL036  
DEL036 Revised 22 FEB-1994 Printed 25 FEB-1994

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

"DELRIN" is a registered trademark of DuPont.

# Tradenames and Synonyms

- "DELRIN" DE8101 BK602
- "DELRIN" DE83301 NCO1M
- "DELRIN" DE9391 BK602
- "DELRIN" 100P BK602, 100P GYA210, 100P GYB105, 100P NCO10,
- "DELRIN" 500P BK602, 500P BK652, 500P BL1000, 500P BLA008,
- "DELRIN" 500P BLH028, 500P BLH029, 500P BLH030,
- "DELRIN" 500P BNA054, 500P BNA074, 500P BNA084, 500P BNA086,
- "DELRIN" 500P GN6002, 500P GYA100, 500P GYA129, 500P GYA202,
- "DELRIN" 500P GYA210, 500P GYA214, 500P GYA225, 500P GYB807,
- "DELRIN" 500P GYH217, 500P GYH807, 500P NCO10, 500P IOR7001,
- "DELRIN" 500P OR720, 500P RD836, 500P RD850, 500P RD889,
- "DELRIN" 500P RDH884, 500P RDH885, 500P RDH886, 500P VTH690,
- "DELRIN" 500P WT610, 500P WT817, 500P WT830, 500P WTB836,
- "DELRIN" 500P YL7013, 500P YLH1001,
- "DELRIN" 900P BK1001, 900P BK1002, 900P BK602, 900P BK634,
- "DELRIN" 900P BN1002, 900P BN1003, 900P BN1004, 900P BNA074,
- "DELRIN" 900P BNA085, 900P BZ631, 900P GN913, 900P GYA129,
- "DELRIN" 900P GYA156, 900P GYA203, 900P GYA205, 900P GY1004,
- "DELRIN" 900P GY6002, 900P NCO10, 900P WT1002,
- "DELRIN" 1700P BK602, 1700P NCO10, 1700P RD776,

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

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**COMPOSITION/INFORMATION ON INGREDIENTS**


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# **Components**

<b>Material</b>	<b>CAS Number</b>	<b>%</b>
POLYOXYMETHYLENE HOMOPOLYMER	25231-38-3	>95
Carbon Blacks (Some colored versions only)	1333-86-4	<1
Non-Regulated Stabilizers, Colorants, and Lubricants		<3.5
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.

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**HAZARDS IDENTIFICATION**


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**Potential Health Effects****ADDITIONAL HEALTH EFFECTS**

Read "Safety Precautions to Observe When Handling Molten "Delrin" Acetal Resin" and "Safety Precaution" in Molding Manual H26577 before using "Delrin".

**ACUTE OR IMMEDIATE EFFECTS: ROUTES OF ENTRY AND SYMPTOMS:**

**INGESTION:** No toxic effect observed.

**SKIN:** Not toxic. Hot polymer will cause thermal burns.

**INHALATION:** Fumes from molten polymer should not be inhaled. Formaldehyde is highly irritating to the eyes and upper respiratory tract and may cause headache and nausea. Inhalation of fines from ground pellets can irritate the nose and throat.

**CHRONIC EFFECTS:** Formaldehyde is released in small quantity during melt processing. A statistically significant number of nasal cancers has been found in rats after prolonged exposure to 15ppm of formaldehyde.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Individuals with preexisting diseases of the lungs may have increased susceptibility to the toxicity of excessive exposure to formaldehyde.

**Carcinogenicity Information**

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

(HAZARDS IDENTIFICATION - Continued)

Material  
Formaldehyde

IARC MTP OSHA ACCI

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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 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. Wear self-contained breathing apparatus.

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**ACCIDENTAL RELEASE MEASURES**  
-----**Safeguards (Personnel)**

NOTE: Review FIRE FIGHTING MEASURES and FIRST AID 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.

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**HANDLING AND STORAGE**  
-----**Handling (Personnel)**

See FIRST AID and PROTECTION INFORMATION SECTIONS

**Storage**

Dry storage. Keep container closed to prevent contamination.  
Open containers only in well-ventilated area.

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**EXPOSURE CONTROLS/PERSONAL PROTECTION**  
-----**Engineering Controls**

Use only with adequate ventilation.

**VENTILATION** Use adequate ventilation at processing equipment.

**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.

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(EXPOSURE CONTROLS/PERSONAL PROTECTION, Continued)

Exposure Guidelines

Applicable Exposure Limits

POLYOXYMETHYLENE HOMOPOLYMER

PEL (OSHA) : None Established
TLV (ACGIH) : None Established
AEL \* (Du Pont) : 10 mg/m3, 8 Hr. TWA, total dust
5 mg/m3, 8 Hr. TWA, respirable dust

Carbon Blacks (Some colored versions only)

PEL (OSHA) : 3.5 mg/m3, 8 Hr. TWA
TLV (ACGIH) : 3.5 mg/m3, 8 Hr. TWA
AEL \* (Du Pont) : 3.5 mg/m3, 8 Hr. TWA (Polynuclear Aromatic Hydrocarbon Content < 50%)

Formaldehyde

PEL (OSHA) : 0.75 ppm, 0.92 mg/m3, 8 Hr. TWA
STEL 2 ppm, 2.5 mg/m3
TLV (ACGIH) : Ceiling 0.3 ppm, 0.37 mg/m3
AEL \* (Du Pont) : 1 ppm, 8 & 12 Hr. TWA
2 ppm, 15 minute TWA

\* AEL is Du Pont'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, incompatible with halogenated polymers such as PVC and PVDC.

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(STABILITY AND REACTIVITY - Continued)

decomposition

Hazardous gases/vapors produced are formaldehyde.

polymerization

Polymerization will not occur under normal conditions.

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 : **Not Regulated**  
Hazard Class : **Not Regulated**

REGULATORY INFORMATION

U.S. Federal Regulations

TSCA Inventory Status : **Listed.**

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**OTHER INFORMATION**


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**NFPA, NFCA-EMIS**

NFPA Rating	: 1
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.

**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.

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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	: D. L. LICZWEK
Address	: DUPONT ENGINEERING POLYMERS CHESTNUT RUN PLAZA 713 WILMINGTON, DE 19880-0713
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# Indicates updated section.

End of MSDS

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