



The MSDS format adheres to the standards and regulatory requirements  
of the United States and may not meet regulatory requirements  
in other countries.

DuPont  
Material Safety Data Sheet

Page 1

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"CRASTIN" THERMOPLASTIC POLYESTER RESINS ON CRA008  
CRA008 Revised 4-AUG-2005  
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CHEMICAL PRODUCT/COMPANY IDENTIFICATION  
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Material Identification

"CRASTIN" is a registered trademark of DuPont.

Tradenames and Synonyms

"CRASTIN" SK601 BK851,  
"CRASTIN" SK601 NC010,  
"CRASTIN" SK602 BK503,  
"CRASTIN" SK602 BK851,  
"CRASTIN" SK602 BKB600,  
"CRASTIN" SK602 BKB602,  
"CRASTIN" SK602 BNB643,  
"CRASTIN" SK602 BN656,  
"CRASTIN" SK602 BNB656,  
"CRASTIN" SK602 GN558,  
"CRASTIN" SK602 GY659,  
"CRASTIN" SK602 GYB659,  
"CRASTIN" SK602 GYB807,  
"CRASTIN" SK602 NC010,  
"CRASTIN" SK602 RDB570,  
"CRASTIN" SK602 RD576,  
"CRASTIN" SK602 RDB576,  
"CRASTIN" SK603 BK503,  
"CRASTIN" SK603 BK851,  
"CRASTIN" SK603 NC010,  
"CRASTIN" SK605 BK503,  
"CRASTIN" SK605 BK851,  
"CRASTIN" SK605 BKB609,  
"CRASTIN" SK605 GY802,  
"CRASTIN" SK605 GYB802,  
"CRASTIN" SK605 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

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COMPOSITION/INFORMATION ON INGREDIENTS  
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## # Components

Material	CAS Number	%
POLYBUTYLENE TEREPHTHALATE	30965-26-5	>65
GLASS FIBERS		5-40
NON-REGULATED STABILIZERS, LUBRICANTS, COLORANTS		<2
CARBON BLACK	1333-86-4	0-1

## 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.

Additives in this product do not present a respiration hazard unless the product is ground to a powder of respirable size and the dust is inhaled. All dusts are potentially injurious to the respiratory tract if respirable particles are generated and inhaled in sufficiently high concentrations. Good industrial hygiene practices, as with all dusts, should include precautions to prevent inhalation of respirable particles.

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HAZARDS IDENTIFICATION  
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## Potential Health Effects

## POLYBUTYLENE TEREPHTHALATE

Eye contact with Polybutylene Terephthalate particles may cause mechanical irritation with discomfort, tearing, or blurring of vision.

Decomposition products caused by overheating Polybutylene Terephthalate may cause skin, eye or respiratory tract irritation.

## FIBER GLASS

The mechanical action of the sharp fibers from Fiber Glass may cause skin irritation with discomfort or rash.

Eye contact with Fiber Glass particles may cause mechanical eye irritation with discomfort, tearing, or blurring of vision.

Inhalation of Fiber Glass particles may cause irritation of the upper respiratory passages, with coughing and discomfort.

Results from epidemiology studies suggest no causal relationship between Fiber Glass exposure and cancer. One epidemiology study does indicate a slight increase in lung cancer deaths. The evidence that fiber glass is related to these increased lung cancer deaths is considered weak.

## (HAZARDS IDENTIFICATION - Continued)

Individuals with preexisting diseases of the lungs may have increased susceptibility to the toxicity of excessive exposures.

## CARBON BLACK

Immediate effects of overexposure to Carbon Black by inhalation may include irritation of the nose, throat, and lungs with cough, difficulty breathing or shortness of breath.

If particles from Carbon Black contact the eye, mechanical irritation with tearing, pain or blurred vision may result.

Significant skin permeation, and systemic toxicity, after contact with Carbon Black appears unlikely. There are no reports of human sensitization.

Epidemiologic studies demonstrate no significant risk of human cancer from exposure to Carbon Black. While some reports cite an increased incidence of pulmonary abnormalities, such as decreased pulmonary function and radiological changes among Carbon Black workers, other reports show no correlation between exposure and effects on pulmonary function or disease.

Increased susceptibility to the effects of Carbon Black may be observed in persons with pre-existing disease of the lungs.

## Carcinogenicity Information

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

Material  
CARBON BLACK

IARC NTP OSHA ACGIH  
2B

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FIRST AID MEASURES  
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## 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.

## (FIRST AID MEASURES - Continued)

## INGESTION

No specific intervention is indicated as compound is not likely to be hazardous by ingestion.

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FIRE FIGHTING MEASURES  
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## Flammable Properties

Flash Point : Not Applicable

## Fire and Explosion Hazards:

Combustible. Hazardous gases/vapors produced in fire are carbon monoxide.

Like most organic materials in powder form, dust generated from this product may form a flammable dust-air mixture. Potential for a dust explosion may exist. Minimize the generation and accumulation of dust. Keep away from sources of ignition.

## 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  
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## Safeguards (Personnel)

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

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HANDLING AND STORAGE  
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## Handling (Personnel)

See FIRST AID and PERSONAL PROTECTIVE EQUIPMENT SECTIONS.

## Handling (Physical Aspects)

Minimize the generation and accumulation of dust.

## Storage

Store in a cool, dry place. Keep containers tightly closed to prevent moisture absorption and contamination.

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EXPOSURE CONTROLS/PERSONAL PROTECTION

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## Engineering Controls

VENTILATION When hot processing this material, use local and/or general exhaust ventilation to control the concentration of vapors and fumes below exposure limits.

In cutting or grinding operations with this material, use local exhaust to control the concentration of dust below exposure limits.

## Personal Protective Equipment

## Eye/Face Protection

Wear safety glasses. Wear coverall chemical splash goggles and face shield when possibility exists for eye or face contact due to splashing or spraying of molten material. A full face mask positive-pressure air-supplied respirator provides protection from eye irritation.

## 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.

During grinding, sawing, routing, drilling or sanding operations use a NIOSH/MSHA approved air-purifying respirator with dust/mist cartridge or canister if airborne particulate concentrations are expected to exceed permissible exposure levels.

## Protective Clothing

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

Wear leather or cotton gloves when grinding, sawing, routing, drilling or sanding.

## Exposure Guidelines

## Exposure Limits

"CRASTIN" THERMOPLASTIC POLYESTER RESINS ON CRA008

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

GLASS FIBERS

PEL (OSHA) : None Established  
TLV (ACGIH) : 5 mg/m<sup>3</sup>, 8 Hr.TWA, inhalable particulate  
A4  
AEL \* (DuPont) : 5 mg/m<sup>3</sup> total dust - 8 Hr. TWA, non-  
respirable fiber (> 3 microns in  
diameter) non-fibrous particulate.

CARBON BLACK

PEL (OSHA) : 3.5 mg/m<sup>3</sup>, 8 Hr. TWA  
TLV (ACGIH) : 3.5 mg/m<sup>3</sup>, 8 Hr. TWA, A4  
AEL \* (DuPont) : 0.5 mg/m<sup>3</sup>, 8 & 12 Hr.TWA, (Polynuclear  
Aromatic Hydrocarbon Content <0.1%)  
Includes Channel, Lamp, and Thermal  
Black

\* 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.

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PHYSICAL AND CHEMICAL PROPERTIES  
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## Physical Data

Melting Point : 220-228 C (428-442 F)  
Solubility in Water : Insoluble  
Odor : None  
Form : Pellets  
Specific Gravity : >1

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STABILITY AND REACTIVITY  
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## Chemical Stability

Stable at normal temperatures and storage conditions.

## Conditions to Avoid

Temperatures above 570 F (299 C) . Abnormally long processing  
time or high temperatures can produce irritating and toxic fumes.

## Incompatibility with Other Materials

Incompatible or can react with oxidizing agents.

## (STABILITY AND REACTIVITY - Continued)

## Decomposition

Hazardous gases or vapors can be released, including carbon monoxide, aldehydes, tetrahydrofuran.

## Polymerization

Polymerization will not occur.

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TOXICOLOGICAL INFORMATION  
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## Animal Data

## Polybutylene Terephthalate

Rats exposed to combustion products exhibited signs of carbon monoxide intoxication.

No animal data are available to define the carcinogenicity, developmental, reproductive or mutagenic hazards of Polybutylene Terephthalate.

## Fiber Glass

Skin irritation and mild eye irritation occurs in animals, but these effects are attributed primarily to mechanical damage rather than a chemical effect.

The effects in mice from single exposure by intratracheal instillation with Fiber Glass include an inflammatory response. Repeated inhalation exposures invoked pulmonary macrophage reactions similar to biologically inert dusts.

Tests in some animals with Fiber Glass demonstrate carcinogenic activity. However, these studies were by artificial implantation or injection of fine glass fibers into the chest, abdominal cavity, or trachea and are judged to be irrelevant to industrial exposure. Chronic inhalation exposure of animals to fiber glass at low concentrations produced minimal fibrosis in one study and no adverse effects in a different study.

No animal test reports are available to define mutagenic, developmental, or reproductive hazards.

## CARBON BLACK

Oral ALD, rat: > 25,100 mg/kg

Repeated inhalation exposure of animals to Carbon Black caused inflammation of the respiratory tract, lungs and emphysema.

Repeated exposure to high doses of Carbon Black by ingestion or skin contact caused no significant toxicological effects.

## (TOXICOLOGICAL INFORMATION - Continued)

No adequate studies have been conducted in animals to define the carcinogenicity of Carbon Black by ingestion. In several skin painting studies using various Carbon Blacks no carcinogenicity was observed. Tests by inhalation for carcinogenicity in rats show significant increases in lung tumors in female rats but not male rats. In another study using female mice exposed by inhalation to Carbon Black there was no increase in the incidence of respiratory tract tumors. Researchers conducting the rat inhalation studies believe that these effects probably result from the massive accumulation of small dust particles in the lung which overwhelm the normal lung clearance mechanisms. This represents "lung overload" phenomenon, rather than a specific chemical effect of the dust particle in the lung.

Tests have shown that this material does not cause genetic damage in bacterial or mammalian cell cultures. Tests in animals for genetic toxicity have produced mostly negative results. No animal data are available to define developmental or reproductive toxicity.

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ECOLOGICAL INFORMATION  
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## Ecotoxicological Information

## AQUATIC TOXICITY:

No information is available. Toxicity is expected to be low based on insolubility in water. Do not discharge to streams, ponds, lakes or sewers.

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DISPOSAL CONSIDERATIONS  
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## 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, but incinerator must be capable of scrubbing out acidic combustion products. Treatment, storage, transportation, and disposal must be in accordance with applicable federal, state/provincial, and local regulations.

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TRANSPORTATION INFORMATION  
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## Shipping Information

Not regulated in transportation by DOT/IMO/IATA.



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REGULATORY INFORMATION  
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## U.S. Federal Regulations

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

## 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)- Carbon black.

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

The State of California, under Proposition 65, regulates Carbon Black - airborne, unbound particles of respirable size as a carcinogen. In this product, carbon black is not supplied in the form regulated in California.

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)- Carbon black.

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OTHER INFORMATION  
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## 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.

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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 : REGULATORY AFFAIRS  
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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