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

"ZYTEL" POLYAMIDE RESINS ON SYNONYM LIST ZYT007
ZYT007 Revised 27-MAY-2003

CHEMICAL PRODUCT/COMPANY IDENTIFICATION

Material Identification

"ZYTEL", "MARANYL" are registered trademarks of DuPont.

Tradenames and Synonyms

"ZYTEL" 70G30HSL BK099, 70G30HSL BK139,
"ZYTEL" 70G30HSL NC010;
"ZYTEL" 70G30HSLR BK099, 70G30HSLR NC010;
"ZYTEL" 70G30HSR2 BK430;
"ZYTEL" 70G30PSR NC010;
"ZYTEL" 70G33HS1L BK031, 70G33HS1L BK031R,
"ZYTEL" 70G33HS1L BK104TP, 70G33HS1L BKB031,
"ZYTEL" 70G33HS1L BLB299, 70G33HS1L BLB378,
"ZYTEL" 70G33HS1L BLB507, #
"ZYTEL" 70G33HS1L GNB239, 70G33HS1L GNB300,
"ZYTEL" 70G33HS1L GYB255, 70G33HS1L GYB265,
"ZYTEL" 70G33HS1L GYB269, 70G33HS1L GYB519,
"ZYTEL" 70G33HS1L GYB522, 70G33HS1L NC010,
"ZYTEL" 70G33HS1L NC010J, 70G33HS1L NC010P,
"ZYTEL" 70G33HS1L YLB192,
"ZYTEL" 70G33HS1L RDB311;
"ZYTEL" 70G33L BK031, 70G33L NC010;
"ZYTEL" 70G35HS1L BK031R;
"ZYTEL" FE5105 NC010;
"ZYTEL" FE5329 NC010, FE5354 BK031;
"ZYTEL" FE5423 NC010, FE5468 NC010;
"ZYTEL" FE15005 BK033;
"MARANYL" A475

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	%
POLYHEXAMETHYLENE ADIPAMIDE (Nylon 66)	32131-17-2	>65
SHORT GLASS FIBERS		<35
Non-Regulated Colorants, Stabilizers, Lubricants		<4

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.

HAZARDS IDENTIFICATION

Potential Health Effects

ADDITIONAL HEALTH EFFECTS

Read "ZYTEL" Molding Guide before using this product.

POLYHEXAMETHYLENE ADIPAMIDE (Nylon 66)

In general, skin irritation has not been produced in human patch tests with Nylon 66. However, a small percentage of subjects may respond to prolonged contact with redness of skin. Significant skin permeation, and systemic toxicity, after contact appears unlikely. There are no reports of human sensitization.

If particles of Nylon 66 contact the eye, mechanical irritation with tearing, pain or blurred vision may result.

FIBERGLASS

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.

(HAZARDS IDENTIFICATION - Continued)

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.

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

Carcinogenicity Information

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

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 : Not Applicable

Fire and Explosion Hazards:

Large molten masses may ignite spontaneously in air. Water quenching of such masses is good practice.

Hazardous gases/vapors produced in fire are ammonia, carbon monoxide, small amounts of, hydrogen cyanide, and, aldehydes.

(FIRE FIGHTING MEASURES - Continued)

Extinguishing Media

Water, Foam, Dry Chemical, CO2.

Fire Fighting Instructions

Keep personnel removed and upwind of fire. 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

Sweep up to avoid slipping hazard.

HANDLING AND STORAGE

Handling (Personnel)

See FIRST AID and PERSONAL PROTECTIVE EQUIPMENT SECTIONS.

Storage

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

EXPOSURE CONTROLS/PERSONAL PROTECTION

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 and face contact due to splashing or spraying of molten material.

(EXPOSURE CONTROLS/PERSONAL PROTECTION - Continued)

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
"ZYTEL" POLYAMIDE RESINS ON SYNONYM LIST ZYT007

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
POLYHEXAMETHYLENE ADIPAMIDE (Nylon 66)

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

SHORT GLASS FIBERS

PEL	(OSHA)	: None Established
TLV	(ACGIH)	: 5 mg/m3, 8 Hr.TWA, inhalable particulate A4
AEL *	(DuPont)	: 5 mg/m3 total dust - 8 Hr. TWA, non-respirable fiber (> 3 microns in diameter) non-fibrous particulate.

* 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	: 250-260 C (482-500 F)
Solubility in Water	: Insoluble
Odor	: None
Form	: Pellets
Specific Gravity	: >1

STABILITY AND REACTIVITY

Chemical Stability

Stable at normal temperatures and storage conditions.

Conditions to Avoid

Temperatures above 340 C (644 F) .

Incompatibility with Other Materials

Incompatible or can react with strong acids, oxidizing agents.

Decomposition

HAZARDOUS DECOMPOSITION PRODUCTS: Cyclopentanone, carbon monoxide, aldehydes, and ammonia.

Polymerization

Polymerization will not occur.

TOXICOLOGICAL INFORMATION

Animal Data

Nylon 66
Oral LD50, rat: > 10,000 mg/kg

Nylon 66 is not a skin irritant in tests with animals.

Single exposure by ingestion to high doses caused decreased body weight. Long-term exposure caused no significant toxicological effects.

Repeated inhalation exposure caused histopathological changes of the lungs, and kidneys.

In animal testing Nylon 66 has not caused carcinogenicity. No animal data are available to define developmental, reproductive or mutagenic hazards.

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 intratrachael instillation with Fiber Glass include an inflammatory response. Repeated inhalation exposures invoked pulmonary macrophage reactions similar to biologically inert dusts.

(TOXICOLOGICAL INFORMATION - Continued)

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.

ECOLOGICAL INFORMATION

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.

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, 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.

TRANSPORTATION INFORMATION

Shipping Information

Not regulated in transportation by DOT/IMO/IATA.

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

(REGULATORY INFORMATION - Continued)

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.

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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