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# **Material Safety Data Sheet**

## **Nylon**

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DuPont Polymers



# “ZYTEL” ACETAL RESIN ALL IN SYNONYM LIST DEL011

## CHEMICAL PRODUCT/COMPANY IDENTIFICATION

### Material Identification

"ZYTEL" is a registered trademark of DuPont

### Tradenames and Synonyms

- "ZYTEL" EFE1068 NC010, FE3074 NC010, FE3415 NC010,
- "ZYTEL" FE3421 NC010, FE3491 NC010, FE3491C NC010,
- "ZYTEL" FE3498 NC010, FE3583 NC010, FE3598 NC010,
- "ZYTEL" FE3599 NC010, FE3611 NC010, FE3614 NC010,
- "ZYTEL" FE3620 NC010, FE3629 NC010, FE3632 NC010,
- "ZYTEL" FE3653 NC010, FE3654 NC011, FE3655 NC010,
- "ZYTEL" FE3656 NC010, FE3657 NC010, FE3662 NC010,
- "ZYTEL" FE3667 NC010, FE3677 NC010, FE3684 NC010,
- "ZYTEL" FE3694 NC010, FE3699 NC010, FE3701 NC010,
- "ZYTEL" FE3701 NC010A, FE3705 NC010, FE3706 NC010,
- "ZYTEL" FE3738 NC010
- "ZYTEL" VLM NC010, 10ANG NC010,
- "ZYTEL" 101 NC010, 101 NC010W, 101F NC010, 101F NC010N,
- "ZYTEL" 101F NC010W, 101FS NC010, 101L NC010, 101L NC010W,
- "ZYTEL" 103FHS NC010, 103HSL NC010, 122L NC010, 132F NC010,
- "ZYTEL" 132F NC010W, 133L NC010, 135F NC010, 42 NC010,
- "ZYTEL" 42A NC010, 42HSB NC010, 42HSX NC010, 45HSB NC010

### Company Identification

MANUFACTURER/DISTRIBUTOR

DUPONT ENGINEERING POLYMERS  
 1007 MARKET STREET  
 WILMINGTON, DE 19898

### PHONE NUMBERS

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

## COMPOSITION/INFORMATION ON INGREDIENTS

Components Material	CAS Number	%
NYLON 66	32131-17-2	>98
NON-REGULATED LUBRICANTS & STABILIZERS		< 2

### 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

Read Section 12 Operating Precautions in "Zytel" Molding Guide Bulletin E97221 before using this product.

### POLYHEXAMETHYLENE ADIPAMIDE

Oral LD50 is > 10,000 mg/kg in rats. A single large oral exposure (10,000 mg/kg) produced only a slight initial weight loss. Two-year tests in rats and one year tests in dogs at levels of 10% in the diet produced no adverse effects. Repeated inhalation exposure produced no gross changes and only microscopic lung and kidney changes. The compound is not a skin irritant. Tests in animals demonstrate no carcinogenic activity.

No adverse health effects are expected from human exposure to polyhexamethylene adipamide, except for mechanical irritation of skin and eyes caused by particles. Significant skin permeation, and systemic toxicity, after contact appears unlikely.

### 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	400 C (752 F)
Method	D1929

#### Fire and Explosion Hazards:

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

HAZARDOUS GASES/VAPORS PRODUCES IN FIRE ARE: Ammonia, carbon monoxide; small amounts of hydrogen cyanide and aldehydes.

#### **Extinguishing Media**

Water, Foam, Dry Chemical, CO<sub>2</sub>.

#### **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.

#### **Accidental Release Measures**

Sweep up to prevent a slipping hazard.

### HANDLING AND STORAGE

#### **Handling (Personnel)**

See FIRST AID and PROTECTIVE EQUIPMENT sections.

#### **Storage**

Cool, dry place. Keep containers tightly closed to prevent moisture absorption and contamination.

### EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Controls** Use sufficient ventilation to control fumes from hot processing.

#### **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. A full face mask respirator provides protection from eye irritation.

##### RESPIRATORS

NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge and a dust/mist filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstance 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" NYLON RESINS IN SYNONYM LIST ZYTO22

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
TLV (ACGIH)	None Established

### Other Applicable Exposure Limits

NYLON 66

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

\*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) NE
% Volatiles	ca 1% (water)
Solubility in Water	Insoluble
Odor	None
Form	Granules
Specific Gravity	1.22 – 1.38

## STABILITY AND REACTIVITY

### Other Hazards

STABILITY AT ROOM TEMPERATURE	Stable
MATERIALS TO AVOID	Strong acids and oxidizing agents.
CONDITIONS TO AVOID	Heating above 340 degrees C.
HAZARDOUS DECOMPOSITION PRODUCTS	Cyclopentanone, carbon monoxide, aldehydes, and ammonia.
POLMERIZATION	Will not occur.

## ECOLOGICAL INFORMATION

### Ecotoxicological Information

#### AQUATIC TOXICITY:

Toxicity is not known. Insoluble. Do not release to streams, ponds or lakes.

## 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	Not regulated
TDO	Not regulated

## REGULATORY INFORMATION

### U.S. Federal Regulations

TSCA Inventory Status	Listed.
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## 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.

### 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, 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- 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.

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  
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