



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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"ZYTEL" NYLON RESIN ON SYNONYM LIST ZYT022  
ZYT022 Revised 4-OCT-2005  
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CHEMICAL PRODUCT/COMPANY IDENTIFICATION  
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Material Identification

"ZYTEL" is a registered trademark of DuPont.

# Tradenames and Synonyms

"ZYTEL" AFE1000 NC010,  
"ZYTEL" AFE1001 NC010,  
"ZYTEL" AFE1002 NC010,  
"ZYTEL" AFE1002I NC010,  
"ZYTEL" AFE1003 NC010,  
"ZYTEL" AFE1003I NC010,  
"ZYTEL" AFE1111 NC010,  
"ZYTEL" CFE1111 NC010.  
"ZYTEL" E41HSB NC010.  
"ZYTEL" E50 NC010,  
"ZYTEL" E51HSB NC010,  
"ZYTEL" E51HSB NC010J,  
"ZYTEL" E53 NC010,  
"ZYTEL" E55 NC010,  
"ZYTEL" E101L NC010,  
"ZYTEL" E103HSL NC010,  
"ZYTEL" EFE1032 NC010E,  
"ZYTEL" EFE1068 NC010,  
"ZYTEL" EFE1068 NC010T,  
"ZYTEL" EFE1068 NC010TA,  
"ZYTEL" EFE1117 NC010,  
"ZYTEL" EFE1150 NC010,  
"ZYTEL" EFE1151 NC010,  
"ZYTEL" FE1111 NC010,  
"ZYTEL" FE210021 NC010,  
"ZYTEL" FE3370 NC010,  
"ZYTEL" FE3399 BKB160,  
"ZYTEL" FE3415 NC010,  
"ZYTEL" FE3421 NC010,  
"ZYTEL" FE3491C NC010,  
"ZYTEL" FE3606 NC010,  
"ZYTEL" FE3653 NC010,  
"ZYTEL" FE3677 NC010,  
"ZYTEL" FE3684 NC010,  
"ZYTEL" FE3701 NC010A,  
"ZYTEL" FE3704 NC010,  
"ZYTEL" FE3705 NC010,

## (CHEMICAL PRODUCT/COMPANY IDENTIFICATION - Continued)

"ZYTEL" FE3747 NC010,  
"ZYTEL" FE3748 NC010,  
"ZYTEL" FE3749 NC010,  
"ZYTEL" FE3754 NC010,  
"ZYTEL" FE3755 NC010,  
"ZYTEL" FE3756 NC010,  
"ZYTEL" FE3797 NC010,  
"ZYTEL" FE3807 NC010,  
"ZYTEL" FE3826 BKB160,  
"ZYTEL" FE3827 NC010,  
"ZYTEL" FE3832 NC010,  
"ZYTEL" FE310036 NC010,  
"ZYTEL" FE310043 NC010,  
"ZYTEL" FE310045 NC010  
"ZYTEL" FE310050 NC010,  
"ZYTEL" FE310052F NC010  
"ZYTEL" FE310063 NC010,  
"ZYTEL" FE310081 NC010,  
"ZYTEL" VLM NC010,  
"ZYTEL" 10ABG NC010,  
"ZYTEL" 10ABGD NC010,  
"ZYTEL" 10ANG NC010,  
"ZYTEL" 101 NC010,  
"ZYTEL" 101F NC010,  
"ZYTEL" 101F NC010N,  
"ZYTEL" 101F NC999,  
"ZYTEL" 101L NC010,  
"ZYTEL" 103FHS NC010,  
"ZYTEL" 103HS NC010,  
"ZYTEL" 103HSL NC010,  
"ZYTEL" 113 NC010,  
"ZYTEL" 122L NC010,  
"ZYTEL" 132F NC010.  
"ZYTEL" 135F NC010,  
"ZYTEL" 148 NC010,  
"ZYTEL" 42A NC010,  
"ZYTEL" 42A NC010A,  
"ZYTEL" 42HSX NC010,  
"ZYTEL" 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 : 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	%
POLYHEXAMETHYLENE ADIPAMIDE (NYLON 66)	32131-17-2	>98
LUBRICANTS & STABLIZERS		<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.

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HAZARDS IDENTIFICATION  
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## Potential Health Effects

## ADDITIONAL HEALTH EFFECTS

Read the datasheet for this product or the molding guide for this resin family.

## POLYHEXAMETHYLENE ADIPAMIDE

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.

## 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.

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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

## (FIRST AID MEASURES - Continued)

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.

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FIRE FIGHTING MEASURES  
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## # Flammable Properties

Flash Point : Not Applicable

## Fire and Explosion Hazards:

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.

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, traces of hydrogen cyanide, aldehydes.

## 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.

## Spill Clean Up

Spilled material is a slipping hazard.

## (ACCIDENTAL RELEASE MEASURES - Continued)

Sweep up to avoid slipping hazard.

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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.

## (EXPOSURE CONTROLS/PERSONAL PROTECTION - Continued)

## 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

"ZYTEL" NYLON RESIN ON SYNONYM LIST ZYT022

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

POLYHEXAMETHYLENE ADIPAMIDE (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.

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PHYSICAL AND CHEMICAL PROPERTIES  
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## # Physical Data

Melting Point : >200 C (>392 F)  
Solubility in Water : Insoluble  
Odor : None  
Form : Pellets  
Specific Gravity : >1.0

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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 340 C (644 F) .

## Incompatibility with Other Materials

Incompatible or can react with strong acids, oxidizing agents.

## (STABILITY AND REACTIVITY - Continued)

## Decomposition

Hazardous gases or vapors can be released, including ammonia, carbon monoxide, cyclopentanone, hydrogen cyanide, nitrogen oxides.

## Polymerization

Polymerization will not occur.

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TOXICOLOGICAL INFORMATION  
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## 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 insufflation 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.

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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 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.

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.

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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  
DUPONT ENGINEERING POLYMERS  
Address : CHESTNUT RUN PLAZA 713  
WILMINGTON, DE 19880-0713  
Telephone : 302-999-4257

# Indicates updated section.



(Continued)

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