

CUSTOM RESINS
MATERIAL SAFETY DATA SHEET
MSDS #1

PRODUCT IDENTIFICATION (see Products Covered, below)

Trade Name:	Nylon 6	Chemical Name:	Polycaprolactam
Chemical Family:	Polyamide	CAS Form:	25038-54-4
Manufacturer's Name:	Custom Resins	Manufacturer's Phone Number:	
Manufacturer's Address:	P. O. Box 46 1421 Highway 136 West Henderson, KY 42419		270-826-7641

Tradenames and Synonyms

Nylene® 401	NX4512	Nylene® 400	Nylene® 404	Nylene® RD991
Nylene® 401A	NX3024	Nylene® 406	Nylene® 451	Nylene® 409
Nylene® 401D	NX3024A	Nylene® 406A	Nylene® 451A	Nylene® 409A
Nylene® 401F	Nylene® 615SA	Nylene® NX3411	Nylene® 600	Nylene® RD1025
Nylene® 615	Nylene®NX1440	Nylene® NX4797	Nylene® NX4805	Nylene® NX3024HS
Nylene® 615I	Nylene® 474	Nylene® 494	Nylene® RD937	Nylene® RD1038
Nylene® 609 609HS	Nylene® 406F	Nylene® NY6FC1100BG	Nylene® RD963	Nylene® RD929
Nylene® NA59				

HAZARDOUS INGREDIENTS: None per 29 CFR 1910.1200

PHYSICAL DATA

Appearance & Odor:	0.1" x 0.1" white pellets, odorless
Specific Gravity:	1.14
Melting Point:	220°C
Boiling Point:	Not applicable, non-volatile solid
Vapor Pressure:	Negligible at ambient
Solubility in Water:	Negligible
Reactivity in Water:	None
Auto Ignition Temperature:	435°C

PRODUCT HANDLING PROCEDURES

Ventilation of Processing Fumes

Virtually all thermoplastic resins emit processing fumes when heated to extrusion or injection molding temperatures. These fumes are complex mixtures of vapors, droplets and suspended particles that are representative of the specific resin formulation. Colorants and other additives used to enhance resin properties may be volatilized. In addition, the fumes may contain thermal decomposition products from the base resin and the various additives.

The concentration and composition of processing fume components will depend upon resin formulation, the dryness of the resin, processing temperature, residence time in the processing equipment, exposed surface area of the part being processed and equipment variables (screw design, venting parameters, etc.)

The major fume components evolved by Custom Resins' nylon at normal processing conditions are caprolactam and low molecular weight volatile polymer fractions (oligomers). These fumes can be detected visually as "smoke" around extrusion dies or when injection molds are opened.

The OSHA PEL for caprolactam vapor is 20 mg/m³ TWA and 40 mg/m³ STEL. Ventilation should be provided to ensure that this level is not exceeded in workplace air.

These caprolactam and oligomer fumes may condense on the cooler surfaces of processing and ventilation equipment and should be removed periodically.

Some individuals with specific sensitivities may exhibit eye, nose, throat or dermal irritation if overexposed to processing fumes.

Eye Irritation: Flush eyes thoroughly with clean, low pressure water
Skin Irritation: Wash affected areas with soap and water
Respiratory Irritation: Leave the exposure area and obtain fresh air

In all cases, a physician should be contacted if irritation persists.

Note: Molten resin can cause severe thermal burns which may require expert emergency attention.

Fire and Explosion Hazards

Flammability: Custom Resins' nylon will support combustion when exposed to an external fire source. Precautions similar to those with wood and other combustible materials are recommended.

Toxicity: The primary toxic product of combustion from Custom Resins' nylon is carbon monoxide. Carbon dioxide and oxides of nitrogen are also produced. Incomplete combustion (a smoldering fire, for example) may release caprolactam and volatile oligimers (See "Ventilation of Processing Fumes" section). Small amounts of hydrogen cyanide have also been reported.

Fire Fighting: Water is the best extinguishing medium. MSHA/NIOSH approved pressure demand breathing apparatus should be used.

Explosion: Custom Resins' nylon pellets do not present a dust explosion hazard. Operations such as regrinding or machining should be periodically checked for proper maintenance of dust control devices.

Health Hazard Data

There are no known acute or chronic health hazards associated with exposure to Custom Resins' nylon. See also "Ventilation of Processing Fumes" section.

Spill or Leak Procedures

Resin pellets spilled on floors are a slipping hazard. Sweep, shovel or vacuum spilled resin into containers for reuse or disposal.

Custom Resins nylon pellets, regrinding, parts, etc. are not hazardous wastes as defined by RCRA. In general, these materials may be discharged in accordance with federal, state and local regulations governing the disposal of other common or non-RCRA regulated waste materials. Recycling or incineration are recommended.

Special Protection

In general, special protection beyond established industrial safety practices and procedures is not required for the handling or processing of Custom Resins' nylon. Typical protection should include:

Safety glasses with side shield
Insulated gloves to prevent contact with hot polymer
Self contained breathing equipment, if needed for fire fighting

PRODUCTS COVERED

This MSDS applies to all natural unmodified nylon sold by Custom Resins. This MSDS applies to all colored nylon sold by Custom Resins. See Tradenames and Synonyms.

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ECOLOGICAL

Information on water toxicity is not available. Do not discharge to public waters.

TRANSPORTATION

DOT: Not regulated

TDG: Not regulated

REGULATORY INFORMATION

The products covered are in compliance with TSCA Inventory requirements.

No known substances causing cancer, birth defects or reproductive harm.
(California Prop 65)