

MATERIAL SAFETY DATA

ENTEC NYLON 6/6 RESIN: HYLON N1033HL BK

PRODUCT IDENTIFICATION

Synonyms: Polyamide resin, nylon 6,6 resin
Chemical Name: Adipic acid-hexamethylenediamine resin
CAS No: 32131-17-2 (base polymer)
DOT Proper Shipping Name: Not Applicable
DOT Hazard Class/I.D. No.: Not Applicable
DOT Label: Not Applicable
U.S. Surface Freight Classification: Truck - Plastic granules
Rail - plastic, synthetic, other than liquid
Reportable Quantity (RQ) Under
DOT (49 CFR) and CERCLA Regulations: Not Applicable
Hazard Categories under criteria of
SARA Title III rules (40 CFR Part 370): Not Applicable

PRECAUTIONARY MEASURES AND FIRST AID

HANDLE IN ACCORDANCE WITH GOOD INDUSTRIAL HYGIENE AND SAFETY PRACTICES. THESE PRACTICES INCLUDING AVOIDING UNNECESSARY EXPOSURE AND REMOVAL OF THE MATERIAL FROM EYES, SKIN AND CLOTHING.

OCCUPATIONAL CONTROL PROCEDURES

Eye Protection: Entec nylon 6,6 does not cause significant eye irritation or eye toxicity requiring special protection, except as noted in the Additional Comments Section of this document. Use good industrial practice to avoid eye contact.

OCCUPATIONAL CONTROL PROCEDURES (continued)

Skin Protection: Entec nylon resin does not present a significant skin concern requiring special protection, except as noted in the Additional Comments Section of this document.

Respiratory Protection: Avoid breathing dust. Use NIOSH/MSHA approved respiratory protection equipment when airborne exposure is excessive. Consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH/MSHA or the manufacturer. Respiratory protection programs must comply with 29 CFR 1910.134. .

Ventilation: Provide natural or mechanical ventilation to minimize Exposure. If practical, use local mechanical exhaust ventilation at Sources of air contamination such as open process equipment.

Airborne Exposure Limits:
Product: Entec nylon 6,6 resin

OSHA PEL: None established
ACGIH TLV: None established

FIRE PROTECTION INFORMATION

Flash Ignition Temperature: 788-806OF Method: ASTM-D 1929-77

Auto Ignition Temperature: 788-833OF Method: ASTM-D 1929-77

Extinguishing Media: Water - spray or any Class A extinguishing agent.

Special Firefighting Procedures: Entec nylon 6,6 resin is a combustible thermoplastic material which will melt and drip when ignited and give off combustion products (see "Hazardous Decomposition Products", below) which are toxic. Fire fighters and others exposed to products of combustion should wear full protective clothing including self-contained breathing apparatus. Fire fighting equipment should be thoroughly decontaminated after use.

Unusual Fire and Explosion Hazards: Dust generated during handling and/or storage can form explosive mixtures with air.

REACTIVITY DATA

Materials to Avoid: None

Hazardous Decomposition Products: At temperatures above 530OF/2770C, heavy fuming, carbon monoxide, carbon dioxide, nitrogen oxides and hydrogen cyanide (at temperatures above 660OF/3490C) will occur.

Hazardous Polymerization: Does not occur.

HEALTH EFFECTS SUMMARY

The following information summarizes human experience and results of scientific investigations reviewed by health professionals for hazard evaluation of Entec nylon 6,6 resin and development of Precautionary Measures and occupational Control Procedures recommended in this document.

Effects of Exposure

Skin contact is expected to be the primary route of occupational exposure to Entec nylon 6,6 resin. Occupational exposure to this material has not been reported to cause significant adverse health effects. As a finished product, Entec nylon resin is a synthetic, high molecular weight polyamide resin. Due to its chemical and physical properties, Entec nylon resin does not appear to possess any toxicological properties which would require special handling other than the good industrial hygiene and safety practices employed with any industrial material of this type. '

Toxicological Data

Entec has not conducted toxicity studies. Based on single exposure animal studies conducted on representative nylon resins, these materials orally (rats) and after skin irritating to rabbit eyes are considered to be practically nontoxic application (rabbits). They are slightly nonirritating to rabbit skin.

No adverse effects were reported following studies with rats and dogs fed a similar nylon resin material in their diet for three months.

Components

Nylon 6,6 or nylon 6 based resins may contain other copolymers, color additives, heat stabilizers, flame retardants and/or other performance additives. Under normal use conditions, these additives are contained within the polymer and occupational exposure is not anticipated.

Additional Information

Thermal decomposition products of nylon (polyamide resin), which may be produced at temperatures in excess of the recommended processing temperature, have been reported to be irritating to the mucous membranes and respiratory tract.

PHYSICAL DATA

Appearance: Pellets

odor: Essentially odorless Melting Point: 490-510°F specific Gravity ($H^2 0 = 1$) : 1.39Percent Volatile: <1%

Solubility: Soluble in formic acid and phenol, slightly soluble in boiling water.

NOTE: These physical data are typical values based on material tested by may very form sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specifications for the product.

SPILL, LEAK A DISPOSAL INFORMATION

Waste Disposal: Entec nylon 6,6 resin is not a "hazardous waste" as that term is defined in 40 CFR 261, identification and Listing of Hazardous Waste." Dispose of waste by incineration, sanitary landfill, or other method in accordance with all applicable local, state and federal laws and regulations. Consult your attorney or appropriate regulatory officials for information on such disposal.

Spill or Leakage Procedures: Remove solid particles form floors to prevent falls. Resin pellets contribute to hazardous footing. Sweep up any "inert" organic pellets.

ADDITIONAL COMMENTS

The greatest potential for injury occurs when working with molten nylon such as- during a purge of a molding machine, extruder and the like. During this type of operation, it is essential that all workers in the immediate area wear eye protection and skin protection (sleeves, gloves, etc.). Any machine used to process molten nylon should always be completely flushed with a material such as polystyrene before shutdown.

FOR ADDITIONAL NON-EMERGENCY INFORMATION CONTACT:

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