

MATERIAL SAFETY DATA SHEET

MANUFACTURER:

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I - MATERIAL IDENTIFICATION AND USE

CHEMICAL NAME AND SYNONYMS:

Polycaprolactam; Polyamide 6; Nylon 6

CAS NUMBER:

25038 - 54 - 4

CHEMICAL FAMILY:

Polyamide polymers

FORMULA:

 $[NH(CH_2)_5CO]_n$

CANADA - TRANSPORTATION OF DANGEROUS GOODS CLASSIFICATION:

Not hazardous

CANADA - WHMIS CLASSIFICATION:

Not a controlled article, not a manufactured article

U.S.A. - D.O.T. HAZARD CLASS:

Not regulated

U.S.A. - RCRA STATUS OF UNUSED MATERIAL (40 CFR 261):

Not hazardous

USES: Raw material for injection molding and extrusion

II - INGREDIENTS

INGREDIENTS: Polycaprolactam and proprietary additives

Proprietary ingredients may include such things as carbon black and fibrous glass. Some ingredients in their pure form are listed as hazardous. In pellitized nylon, however, they are encapsulated and are not expected to present any hazards otherwise associated with them.

III - PHYSICAL DATA

PHYSICAL STATE: solid

SPECIFIC GRAVITY: 1.13

MELTING POINT: 215 °C (420 °F)

BULK DENSITY, APPROX.: 0.7 kg / L

SOLUBILITY IN WATER: nil

ODOR: Slight wax odor

APPEARANCE: solid cylindrical pellets

IV - FIRE AND EXPLOSION DATA

FLAMMABILITY: Will ignite and burn above 250 °C (480 °F)

EXTINGUISHING MEDIA: Water, dry chemical, carbon dioxide

SPECIAL FIRE FIGHTING PROCEDURES: Firefighters and others exposed to products of combustion should wear self-contained breathing apparatus to avoid inhalation of combustion products.

V - REACTIVITY DATA

STABILITY: Stable at ambient temperatures

INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizing chemicals

CONDITIONS TO AVOID: Avoid direct contact with flame

HAZARDOUS DECOMPOSITION PRODUCTS: When burned, gases may contain CO and HCN

HAZARDOUS POLYMERIZATION: Will not occur

VI - HEALTH HAZARD DATATHRESHOLD LIMIT VALUE: None established for this material. However ACGIH have limits for "nuisance dusts" which is TLV - TWA = 10 mg / m³.

INHALATION: Avoid breathing gases from molten material. Provide ventilation at processing areas.

VII - SPILL, LEAK & DISPOSAL INFORMATION

WASTE DISPOSAL: Dispose of waste nylon 6 as non-hazardous solid waste in accordance with federal state or provincial and local government regulations.

VIII - SPECIAL PROTECTION INFORMATION

PERSONAL PROTECTIVE EQUIPMENT: Required near molten material, safety glasses, heat resistant gloves and protective garments.

RESPIRATORY PROTECTION: None under normal conditions, organic vapor respirator when around molten polymer.

IX - SPECIAL PRECAUTIONS

HANDLING AND STORAGE: Store in a dry area, avoid damage to containers and keep them closed.

Moisture absorption will cause poor quality processing.

OTHER PRECAUTIONS: In converting nylon 6 to finished products it is heated and melted, it should be in an enclosed processing machinery. The ventilation system should provide local exhaust. Fumes

and vapour given off will contain caprolactam, the TLV-TWA for it are: dust and/or vapour = 5 mg / m³

ENVIRONMENT: Nylon 6 does not biodegrade. If kept uncontaminated it can be reprocessed.

IX - PREPARATION OF MSDS

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DATE: January 8, 1998

REVIEWED BY: K. Davie PHONE (519) 537-6231

DATE: April 7, 2011

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