# Educational Innovations

## MATERIAL SAFETY DATA SHEET

## **Thermoplastic Polymer**

## 1. Identification of the Substance and Company Undertaking

**Product Name(s):** Caprolactone Polymer Product Average Molecular Weight Min 80,000

Chemical Family Polymer

Intended Use Bioabsorbable polymer

**Contact Information:** 

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The following MSDS applies to the finished product only (as a polymer granule or pellet). If handling the monomers to form the final polymeric product, consult the MSDS for the individual components and take appropriate precautions.

#### 2. Hazards Identification

Substance non classified according to directive 67/548/EEC.

**Product Composition** 

Ingredient CAS No.
Poly(ε-caprolactone) 24980-41-4
Assay >99.5%

## 3. Application of the substance

Recommended uses Pharmaceuticals

Automotive industry

Construction Footwear industry

Film

For other particular use, please contact the supplier.

#### 4. Physical and Chemical Properties

Apprearance White Granules/Pellets

Odor
Odorless
PH
Not applicable
Boiling Point
Flash Point
Density
Odorless
Not applicable
275°C
1.1( at 60°C)

Solubility Insoluble in water

Soluble in Aromatic solvents, chlorinated hydrocarbons.

Viscosity 1,500,000mPa.S( at 100°C)

Freezing point Ca. 35 °C Melting Point/range 60-62 °C

Decomposition

temperature Ca. 200°C



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## 5. Quality Index

Item	Index
Polydispersity exponent	Max 1.8
Moisture(%)	Max 0.05%
Colority(Pt-Co)	Max 250
Assay(%)	Min 99.5
Melting Point(°C)	60

## 6. Toxicological Information

The product is biologically inert.

## 7. Occupational Exposure Controls

#### **Respiratory protection**

Use only respiratory protection that confirms to international/national standards.

## Eye protection

Protective goggles/face shield, if appropriate.

#### Hand protection

Protective gloves for protection against hot material.

## Skin protection

Loose-fitting and long sleeved coverall.

#### Other precautions

Consult the industrial hygienist or the safety manager for the selection of personal protective equipment suitable for the working conditions.

## 8. Emergency and First Aid.

## **Eyes Contact**

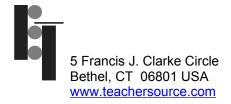
Flush eyes with running water for several minutes, while keeping the eyelids wide open.

#### Skin contact

In case of contact with molten polymer: cool rapidly with cold water without attempting to peel it from skin, obtain medical treatment for burns.

#### Inhalation

Remove the subject from dusty environment and let him blow his nose.



## 9. Disposal Considerations

### **Waste Treatment**

Dispose in compliance with local and national regulations.

It is recommended to contact the producer for recycling/recovery.

If not possible.

Send the product to an authorized industrial waste incinerator or dispose it at a land fill authorized for industrial waste.

### 10. Accidental Release Measures

#### **Personal Precautions**

Follow the protective measures given above, spilled material can be a slipping hazard.

#### Methods for cleaning up

Collect the product with suitable means avoiding dust formation.

Place material into a closed and labeled container.

For disposal methods, refer to following disposal consideration.

## **Environmental precautions**

Prevent discharges into the environment( sewers, rivers, soils etc.)

## 11. Fire-fighting Measures

### Suitable extinguishing media

Powder, Foam, AFFF, CO2, , water spray, large quantities of water.

## 12. Handling, storage and transportation.

**Handling** Avoid heating the product above the decomposition temperature (Ca. 200°C)

**Storage** Keep in original packaging, closed in a dry area, keep awy from ignition and heat

sources.

Transportation Not subject

