



## Regulatory status

This material is not considered hazardous by the U.S. OSHA Hazard Communication Standard (29 CFR 1910.1200) and SIMDUT in Canada.

## Hazards not otherwise classified

Toxic fumes may be emitted at elevated temperatures. Do not breathe vapor. Processing, e.g. by cutting, sawing or grinding, can produce particles and dust. Avoid inhalation of dusts, as even inert dusts may functionally affect respiratory organs.

see section 11: Toxicological information

## 3. Composition / Information on ingredients

Chemical characterization: Article: Thermoplastic

## 4. First aid measures

In case of inhalation:	In case of inhalation of decomposition products, affected person should be moved into fresh air and kept still. If the casualty has difficulty breathing, call a doctor immediately.
Following skin contact:	After contact with molten product, cool skin area rapidly with cold water. Do not peel solidified product off the skin. Seek medical attention.
After eye contact:	In the event of irritation from processing vapors: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. In case of troubles or persistent symptoms, consult an ophthalmologist.
After swallowing:	Not a probable route of exposure. In the case of the formation of dust: Rinse mouth. Seek medical treatment in case of troubles.

## Most important symptoms/effects, acute and delayed

In case of inhalation:

Inhalation of dust may cause irritation of the respiratory system. Overheating released mist or vapors can irritate the respiratory tracts.

Other symptoms: Cough, respiratory complaints, dizziness, nausea, vomiting.

After contact with skin: The melted product can cause severe burns.

After eye contact:

Process vapors can irritate the eyes. Dust contact with the eyes can lead to mechanical irritation.

## Information to physician

Treat symptomatically.

## 5. Fire fighting measures

Flash point/flash point range:

no data available

Auto-ignition temperature: no data available

Suitable extinguishing media:

Water fog, dry chemical powder, foam, carbon dioxide

Extinguishing media which must not be used for safety reasons:

High power water jet.

### Specific hazards arising from the chemical

This material is combustible, but will not ignite readily. Toxic fumes may be emitted at elevated temperatures.

In case of fire may be liberated: Caprolactam, nitrogen oxides (NO<sub>x</sub>), amines, carbon monoxide and carbon dioxide

Protective equipment and precautions for firefighters:

Wear self-contained positive pressure breathing apparatus and full firefighting protective clothing.

Additional information:

Seal off endangered area. Cool endangered containers with water spray and, if possible, remove from danger zone. Use a water fog to control vapors. Do not breathe fumes. Do not allow fire water to penetrate into surface or ground water.

## 6. Accidental release measures

Personal precautions:

Handle in accordance with good industrial hygiene and safety practice.

At processing: Avoid the formation of aerosol/vapors. Avoid generation of dust. Avoid inhalation and contact with skin and eyes. Wear protective equipment. Keep unprotected people away. Ensure adequate ventilation, especially in confined areas.

Environmental precautions:

Do not allow to penetrate into soil, waterbodies or drains.

Methods for clean-up:

Take up mechanically, placing in appropriate containers for disposal. Dispose of waste according to applicable legislation.

## 7. Handling and storage

### Handling

Advices on safe handling: Handle in accordance with good industrial hygiene and safety practice.

At processing: Provide adequate ventilation, and local exhaust as needed. Avoid the formation of aerosol/vapors. Avoid generation of dust. Avoid inhalation and contact with skin and eyes. Wear protective equipment. Keep unprotected people away. When using do not eat, drink or smoke.

Precautions against fire and explosion:

Take standard precautions to prevent fire.

### Storage

Requirements for storerooms and containers:

Keep in a cool place. Keep container dry. Protect from direct sunlight. Keep away from incompatible materials. Store at room temperature.

Hints on joint storage:

Incompatible materials: Strong bases, strong acids, strong oxidizing agents.  
Keep away from food and drinks.

## 8. Exposure controls / personal protection

### Exposure guidelines

Occupational exposure limit values:

Type	Limit value
USA: ACGIH: TWA	10 mg/m <sup>3</sup> Dust limit value, indicativ; inhalable fraction
USA: ACGIH: TWA	3 mg/m <sup>3</sup> Dust limit value, indicativ; respirable fraction
USA: OSHA: TWA	15 mg/m <sup>3</sup> Dust limit value inhalable fraction
USA: OSHA: TWA	5 mg/m <sup>3</sup> Dust limit value respirable fraction

### Engineering controls

Provide good ventilation and/or an exhaust system in the work area.

In case of development of vapors or dust (at processing): Use local exhaust.

See also information in chapter 7, section storage.

### Personal protection equipment (PPE)

Eye/face protection: At processing (recommended): Safety glasses in accordance with OSHA 29 CFR: 1910.133 or ANSI Z87.1-2010.

Skin protection: At processing (recommended): Wear suitable protective clothing.

Recommendation:

Protective gloves according to OSHA Standard - 29 CFR: 1910.138.

Glove material: nitrile rubber (0.11 mm)

Breakthrough time: 480 min.

Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Respiratory protection: Respiratory protection is not necessary if room is well ventilated.

At processing:

When vapors form, use respiratory protection. The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used.

General hygiene considerations:

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and after work. When using do not eat, drink or smoke.

At processing:

Avoid contact with skin, eyes, and clothing. Do not breathe vapors. Do not breathe dust.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

Appearance:	Form: solid Color: varying
Odor:	odorless
Odor threshold:	no data available
pH value:	no data available

**Greenflow, Knitflow, Resinflow**

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Melting point/freezing point:	212 - 500 °F
Initial boiling point and boiling range:	no data available
Flash point/flash point range:	no data available
Evaporation rate:	no data available
Flammability:	This material is combustible, but will not ignite readily.
Explosion limits:	no data available
Vapor pressure:	no data available
Vapor density:	no data available
Density:	no data available
Water solubility:	at 68 °F: insoluble
Partition coefficient: n-octanol/water:	no data available
Auto-ignition temperature:	no data available
Thermal decomposition:	no data available
Additional information:	no data available

## 10. Stability and reactivity

Reactivity:	Refer to section: Possibility of hazardous reactions.
Chemical stability:	Stable under recommended storage conditions.
Possibility of hazardous reactions	No dangerous reactions with proper and specified storage and handling
Conditions to avoid:	Keep away from heat. Protect from direct sunlight. Avoid generation of dust. Avoid the formation of aerosol/vapors.
Incompatible materials:	Strong acids, strong oxidizing agents.
Hazardous decomposition products:	In case of fire may be liberated: Caprolactam, nitrogen oxides (NO <sub>x</sub> ), amines, carbon monoxide and carbon dioxide
Thermal decomposition:	no data available

## 11. Toxicological information

### Toxicological tests

Toxicological effects:	Acute toxicity (oral): Lack of data. Acute toxicity (dermal): Lack of data. Acute toxicity (inhalative): Lack of data. Skin corrosion/irritation: Lack of data. Eye damage/irritation: Lack of data. Sensitisation to the respiratory tract: Lack of data. Skin sensitisation: Lack of data. Germ cell mutagenicity/Genotoxicity: Lack of data. Carcinogenicity: Lack of data. Reproductive toxicity: Lack of data. Effects on or via lactation: Lack of data. Specific target organ toxicity (single exposure): Lack of data. Specific target organ toxicity (repeated exposure): Lack of data. Aspiration hazard: Lack of data.
Other information:	Toxic fumes may be emitted at elevated temperatures. Processing, e.g. by cutting, sawing or grinding, can produce particles and dust. Dust may irritate airways and cause bronchitis symptoms. Information about Caprolactam: Harmful if swallowed. Harmful if inhaled. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation.

### Symptoms

In case of inhalation:  
Inhalation of dust may cause irritation of the respiratory system. Overheating released mist or vapors can irritate the respiratory tracts.  
Other symptoms: Cough, respiratory complaints, dizziness, nausea, vomiting.  
After contact with skin: The melted product can cause severe burns.  
After eye contact:  
Process vapors can irritate the eyes. Dust contact with the eyes can lead to mechanical irritation.

## 12. Ecological information

### Ecotoxicity

Effects in sewage plants: The insoluble part can be precipitated mechanically in suitable sewage treatment plants.

### Mobility in soil

no data available

### Persistence and degradability

Further details: Product is not biodegradable.

### Additional ecological information

General information: Do not allow to penetrate into soil, waterbodies or drains.

### 13. Disposal considerations

**Product**

Recommendation: Dispose of waste according to applicable legislation. Recycling or special waste incineration.

**Contaminated packaging**

Recommendation: Dispose of waste according to applicable legislation. Non-contaminated packages may be recycled.

### 14. Transport information

**USA: Department of Transportation (DOT)**

Proper shipping name: Not controlled under DOT

**Sea transport (IMDG)**

Proper shipping name: Not restricted

Marine pollutant: No

**Air transport (IATA)**

Proper shipping name: Not restricted

**Further information**

No dangerous good in sense of these transport regulations.

### 15. Regulatory information

**National regulations - Great Britain**

Hazchem-Code: -

### 16. Other information

Hazard rating systems:



NFPA Hazard Rating:

Health: 1 (Slight)  
Fire: 1 (Slight)  
Reactivity: 0 (Minimal)

HMIS Version III Rating:

Health: 1 (Slight)  
Flammability: 1 (Slight)  
Physical Hazard: 0 (Minimal)  
Personal Protection: X = Consult your supervisor

HEALTH	1
FLAMMABILITY	1
PHYSICAL HAZARD	0
	X

**Department issuing data sheet**

Contact person: see section 1: Dept. responsible for information

This data sheet cannot cover all possible situations which the user may experience during processing. Each aspect of your operation should be examined to determine if, and which additional precautions may be necessary. All health and safety information contained in this data sheet should be provided to your employees and customers. It is your responsibility to develop appropriate workplace instructions and training programs for employees.

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COMPOSITE  
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