1. Identification

Product identifier used on the label

ULTRAMID® 1C POLYAMIDE

Recommended use of the chemical and restriction on use

Recommended use*: Polymer
Recommended use*: Polymer; for industrial processing only
Suitable for use in industrial sector: Polymers industry

* The “Recommended use” identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:
BASF Mexicana S.A. de C.V.
Av. Insurgentes Sur 975
Col. CD. De Los Deportes,
C.P. 03710 Ciudad de México
MÉXICO

Telephone: +52 55 5325 2600

Emergency telephone number

Tel.: +1-800-849-5204 or +1-833-229-1000
CHEMTREC Int.: +1-703-527-3887

Other means of identification

Chemical family: polyamide
Synonyms: Polyamide

2. Hazards Identification

According to Regulation NOM-018-STPS-2015

Classification of the product

No need for classification according to GHS criteria for this product.
Label elements

The product does not require a hazard warning label in accordance with GHS criteria.

Hazards not otherwise classified

No specific dangers known, if the regulations/notes for storage and handling are considered.

Labeling of special preparations (GHS):

UNDER HOT MELT PROCESSING CONDITIONS, WEAR PERSONAL PROTECTIVE EQUIPMENT TO PREVENT THERMAL BURNS. This is a research sample and has not been assessed for environmental, health and safety aspects.

3. Composition / Information on Ingredients

According to Regulation NOM-018-STPS-2015

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Weight %</th>
<th>Chemical name</th>
</tr>
</thead>
<tbody>
<tr>
<td>105-60-2</td>
<td>&gt;= 0.0 - &lt; 5.0%</td>
<td>caprolactam</td>
</tr>
</tbody>
</table>

4. First-Aid Measures

Description of first aid measures

General advice:
Avoid contact with the skin, eyes and clothing. Remove contaminated clothing.

If inhaled:
If difficulties occur after dust has been inhaled, remove to fresh air and seek medical attention.

If on skin:
Wash thoroughly with soap and water. Burns caused by molten material require hospital treatment.

If in eyes:
In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. If irritation develops, seek medical attention.

If swallowed:
Rinse mouth and then drink 200-300 ml of water. Ingestion is not likely in the available physical form. If ingested, seek medical attention. Do not induce vomiting.

Most important symptoms and effects, both acute and delayed

Symptoms: No significant reaction of the human body to the product known.
Hazards: No hazard is expected under intended use and appropriate handling.

Indication of any immediate medical attention and special treatment needed

Note to physician
Treatment: Treat symptomatically.
5. Fire-Fighting Measures

**Extinguishing media**

Suitable extinguishing media:
- water spray, foam, dry powder, carbon dioxide

**Special hazards arising from the substance or mixture**

Hazards during fire-fighting:
- carbon monoxide, hydrogen cyanide, can be emitted at > 300 °C
Under special fire conditions traces of other toxic substances are possible. Formation of further decomposition and oxidation products depends upon the fire conditions.

**Advice for fire-fighters**

Protective equipment for fire-fighting:
- Wear a self-contained breathing apparatus.

**Further information:**
- Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. Accidental release measures

**Further accidental release measures:**
- High risk of slipping due to leakage/spillage of product.

**Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation.

**Environmental precautions**

No special precautions necessary.

**Methods and material for containment and cleaning up**

For small amounts: Pick up with suitable appliance and dispose of.
For large amounts: Pick up with suitable appliance and dispose of.

7. Handling and Storage

**Precautions for safe handling**

Ensure thorough ventilation of stores and work areas.

Protection against fire and explosion:
- Take precautionary measures against static discharges.

**Conditions for safe storage, including any incompatibilities**

Suitable materials for containers: Stainless steel 1.4301 (V2), Stainless steel 1.4401, Aluminium, High density polyethylene (HDPE)

Further information on storage conditions: Keep container tightly closed. Avoid deposition of dust.
Protect against moisture.

Storage stability:
- Protect against moisture.
8. Exposure Controls/Personal Protection

**Components with occupational exposure limits**

<table>
<thead>
<tr>
<th>Component</th>
<th>Exposure limits</th>
<th>TWA value</th>
<th>STEL value</th>
</tr>
</thead>
<tbody>
<tr>
<td>caprolactam</td>
<td></td>
<td>10 mg/m³</td>
<td>40 mg/m³</td>
</tr>
</tbody>
</table>

**Personal protective equipment**

**Respiratory protection:**
Wear respiratory protection if ventilation is inadequate. Breathing protection if breathable aerosols/dust are formed. Particle filter with high efficiency for solid and liquid particles (e.g. EN 143 or 149, Type P3 or FFP3).

**Hand protection:**
Use additional heat protection gloves when handling hot molten masses (EN 407), e.g. of textile or leather.

**Eye protection:**
Safety glasses with side-shields (frame goggles) (e.g. EN 166)

**Body protection:**
Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

**General safety and hygiene measures:**
Handle in accordance with good industrial hygiene and safety practice. After use of gloves apply skin-cleaning agents and skin cosmetics.

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>granules</td>
</tr>
<tr>
<td>Odour</td>
<td>odourless</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>not applicable</td>
</tr>
<tr>
<td>Colour</td>
<td>translucent</td>
</tr>
<tr>
<td>pH value</td>
<td>not applicable</td>
</tr>
<tr>
<td>Melting range</td>
<td>185 - 210 °C (DIN 53765)</td>
</tr>
<tr>
<td>Boiling range</td>
<td>The substance / product decomposes therefore not determined.</td>
</tr>
<tr>
<td>Sublimation point</td>
<td>No applicable information available.</td>
</tr>
<tr>
<td>Flash point</td>
<td>not applicable</td>
</tr>
<tr>
<td>Flammability</td>
<td>not self-igniting</td>
</tr>
<tr>
<td>Flammability of Aerosol Products</td>
<td>not applicable, the product does not form flammable aerosoles</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>For solids not relevant for classification and labelling.</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>For solids not relevant for classification and labelling.</td>
</tr>
<tr>
<td>Autoignition</td>
<td>&gt; 400 °C (ASTM D1929)</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>not applicable</td>
</tr>
<tr>
<td>Density</td>
<td>1.1 g/cm³ (20 °C, 1,013 hPa)</td>
</tr>
</tbody>
</table>
10. Stability and Reactivity

Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

Oxidizing properties:
not fire-propagating

Chemical stability
The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions
The product is chemically stable.
No hazardous reactions known.

Conditions to avoid
Temperature: > 300 degrees Celsius

Incompatible materials
No substances known that should be avoided.

Hazardous decomposition products

Decomposition products:
Hazardous decomposition products: carbon monoxide, hydrogen cyanide, caprolactam

Thermal decomposition:
> 300 °C (TGA)

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity
Assessment of acute toxicity: Contact with molten product may cause thermal burns. The resin in pelleted form poses a low hazard.
Information on: caprolactam

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Oral
No applicable information available.

Information on: caprolactam
Type of value: LD50
Species: rat (female)
Value: 1,475 mg/kg (Directive 84/449/EEC, B.1)

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Inhalation
Not inhalable due to the physico-chemical properties of the product.

Information on: caprolactam
Type of value: LC50
Species: rat (male/female)
Value: approx. 8.16 mg/l (BASF-Test)
Exposure time: 4 h
An aerosol with respirable particles was tested.

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Dermal
No applicable information available.

Information on: caprolactam
Type of value: LD50
Species: rat (male/female)
Value: > 2,000 mg/kg (Directive 92/69/EEC, B.3)

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Irritation / corrosion
Assessment of irritating effects: Thermal decomposition products of the substance can irritate the eyes, skin, and respiratory tract.

Information on: caprolactam
Assessment of irritating effects: May cause slight irritation to the skin. May cause slight irritation to the eyes.

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Sensitization
Assessment of sensitization: Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

Information on: caprolactam
Assessment of sensitization: Skin sensitizing effects were not observed in animal studies.

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Aspiration Hazard
No aspiration hazard expected.

Chronic Toxicity/Effects
Repeated dose toxicity

Information on: caprolactam
Assessment of repeated dose toxicity: After repeated exposure the prominent effect is local irritation. The substance may cause damage to the upper respiratory tract after repeated inhalation, as shown in animal studies.

Genetic toxicity
Assessment of mutagenicity: Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

Information on: caprolactam
Assessment of mutagenicity: The substance was not mutagenic in bacteria. The substance was not mutagenic in mammalian cell culture. The substance was not mutagenic in studies with mammals. Results from a number of genotoxicity studies with microorganisms, mammalian cell culture and mammals are available. Taking into account all of the information, there is no indication that the substance is genotoxic.

Carcinogenicity
Assessment of carcinogenicity: Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses.

Information on: caprolactam
Assessment of carcinogenicity: In long-term animal studies in which the substance was given in high concentrations by feed, a carcinogenic effect was not observed.

Reproductive toxicity

Information on: caprolactam
Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect.

Other Information
The product has not been tested. The statement has been derived from the properties of the individual components.

Symptoms of Exposure
No significant reaction of the human body to the product known.

12. Ecological Information

Toxicity

Aquatic toxicity
Assessment of aquatic toxicity:
The product has not been tested. The statement has been derived from the structure of the product. There is a high probability that the product is not acutely harmful to aquatic organisms.

**Aquatic toxicity**

**Information on: caprolactam**

**Assessment of aquatic toxicity:**

There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

**Toxicity to fish**

**Information on: caprolactam**

**LC0 (96 h) 100 mg/l, Oryzias latipes (OECD Guideline 203, semistatic)**

**LC50 (96 h) 500 - 1,000 mg/l, Salmo gairdneri, syn. O. mykiss (OECD 203; ISO 7346; 84/449/EEC, C.1, static)**

**LC50 (96 h) 707.1 mg/l, Salmo gairdneri, syn. O. mykiss (OECD 203; ISO 7346; 84/449/EEC, C.1, static)**

**Aquatic invertebrates**

**Information on: caprolactam**

**EC50 (48 h) > 1,000 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)**

**EC50 (48 h) > 500 mg/l, Daphnia magna (DIN 38412 Part 11, static)**

**EC50 (48 h) > 500 mg/l, Daphnia magna (DIN 38412 Part 11, static)**

**Aquatic plants**

**Information on: caprolactam**

**EC50 (72 h) > 1,000 mg/l (growth rate), Selenastrum capricornutum (OECD Guideline 201, static)**

**EC50 (72 h) 427.5 mg/l (growth rate), Scenedesmus subspicatus (DIN 38412 Part 9, static)**

**EC50 (72 h) > 1,000 mg/l (biomass), Selenastrum capricornutum (OECD Guideline 201, static)**

**Microorganisms/Effect on activated sludge**

**Toxicity to microorganisms**

**Information on: caprolactam**

**other aquatic bacterium/EC50 (17 h): 4,240 mg/l**

**Persistence and degradability**

**Assessment biodegradation and elimination (H2O)**

Experience shows this product to be inert and non-degradable.

**Assessment biodegradation and elimination (H2O)**

**Information on: caprolactam**

**Readily biodegradable (according to OECD criteria).**
Bioaccumulative potential

Bioaccumulation potential
The product will not be readily bioavailable due to its consistency and insolubility in water.

Information on: caprolactam

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Additional information

Add. remarks environm. fate & pathway:
Due to the consistency of the product, dispersion into the environment is impossible. Therefore no negative effects on the environment may be anticipated based on the present state of knowledge.

Information on: caprolactam

13. Disposal considerations

Waste disposal of substance:
Check for possible recycling. Observe national and local legal requirements. Incinerate in suitable incineration plant, observing local authority regulations.

Container disposal:
Packs must be completely emptied. Completely emptied packagings can be given for recycling.

14. Transport Information

Land transport
TDG
Not classified as a dangerous good under transport regulations

Sea transport
IMDG
Not classified as a dangerous good under transport regulations

Air transport
IATA/ICAO
Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations
16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2018/10/12

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This information is considered accurate but is not exhaustive and shall only be used as a guideline based on current knowledge of the chemical substance or mixture. Safety precautions suitable for the product must be applied.

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