

Safety Data Sheet

Ultramid® Flex F29

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Version: 4.0

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(30675869/SDS_GEN_US/EN)

1. Identification

Product identifier used on the label

Ultramid® Flex F29

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

Unsuitable for use: Not intended for sale to or use by the general public.

* 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 CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300

BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Chemical family: No data available.

Synonyms: polyamide

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

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

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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. If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

caprolactam

CAS Number: 105-60-2

Content (W/W): > 0.0 - < 3.0%

Synonym: Caprolactam

4. First-Aid Measures

Description of first aid measures

General advice:

Remove contaminated clothing.

Burns caused by molten material require hospital treatment.

If inhaled:

If difficulties occur after vapour/aerosol has been inhaled, remove to fresh air and seek medical attention. Assist in breathing if necessary.

If on skin:

Burns caused by molten material require hospital treatment. Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

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:

Ingestion is not likely in the available physical form. If ingested, seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: (Further) symptoms and / or effects are not known so far

Hazards: No hazard is expected under intended use and appropriate handling.

Indication of any immediate medical attention and special treatment needed

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Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

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

Unsuitable extinguishing media for safety reasons:
water jet

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:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

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

No special precautions necessary.

Environmental precautions

This product is not regulated by RCRA. This product is not regulated by CERCLA ('Superfund').

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

Protection against fire and explosion:

Take precautionary measures against static discharges.

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Conditions for safe storage, including any incompatibilities

The product in undamaged packing need not be stored separately.

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

Further information on storage conditions: Protect against moisture.

Storage stability:
Protect against moisture.

8. Exposure Controls/Personal Protection

Components with occupational exposure limits

| | | |
|-------------|------------|--|
| caprolactam | NIOSH, US: | REL value 0.22 ppm 1 mg/m ³ vapour ; |
| | OSHA Z1A: | STEL value 3 mg/m ³ dust ; |
| | OSHA Z1A: | STEL value 10 ppm 40 mg/m ³ vapour ; |
| | NIOSH, US: | STEL value 0.66 ppm 3 mg/m ³ vapour ; |
| | OSHA Z1A: | TWA value 1 mg/m ³ dust ; |
| | OSHA Z1A: | TWA value 5 ppm 20 mg/m ³ vapour ; |
| | NIOSH, US: | REL value 1 mg/m ³ dust ; |
| | NIOSH, US: | STEL value 3 mg/m ³ dust ; |
| | ACGIH, US: | TWA value 5 mg/m ³ Inhalable fraction and vapor ; |

Advice on system design:
Ensure adequate ventilation.

Personal protective equipment

Respiratory protection:

Wear respiratory protection if ventilation is inadequate. Wear a NIOSH-certified (or equivalent) particulate respirator.

Hand protection:

Wear gloves to prevent contact during mechanical processing and/or hot melt conditions.

Eye protection:

Tightly fitting safety goggles (chemical goggles).

Body protection:

Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:

No special precautions necessary. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Form: pellets
Odour: odourless

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| | | |
|---|--|-------------------|
| Odour threshold: | not applicable | |
| Colour: | white, translucent | |
| pH value: | not applicable | |
| Melting temperature: | approx. 199 °C | (DIN EN ISO 3146) |
| Freezing point: | No data available. | |
| Melting point: | No data available. | |
| Boiling point: | No data available. | |
| Boiling range: | No data available. | |
| Sublimation point: | No applicable information available. | |
| Flash point: | not applicable, the product is a solid | |
| Flammability: | not highly flammable | |
| Lower explosion limit: | For solids not relevant for classification and labelling. | |
| Upper explosion limit: | For solids not relevant for classification and labelling. | |
| Autoignition: | > 400 °C | (ASTM D1929) |
| Vapour pressure: | not applicable | |
| Density: | 1.06 - 1.09 g/cm ³ (20 °C) | (EN ISO 1183-1) |
| Relative density: | No data available. | |
| Bulk density: | 780 kg/m ³ | |
| Vapour density: | not applicable, The product is a non-volatile solid. | |
| Partitioning coefficient n-octanol/water (log Pow): | not applicable | |
| Self-ignition temperature: | not self-igniting | |
| Thermal decomposition: | > 300 °C May decompose if overheated and/or subjected to prolonged heating. | |
| Viscosity, dynamic: | not applicable, the product is a solid | |
| Viscosity, kinematic: | not applicable, the product is a solid | |
| Particle size: | D50 2.5 - 3.5 mm | (measured) |
| Solubility in water: | insoluble | |
| Solubility (quantitative): | No applicable information available. | |
| Solubility (qualitative): | No applicable information available. | |
| Evaporation rate: | not applicable, The product is a non-volatile solid. | |

10. Stability and Reactivity

Reactivity

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

Corrosion to metals:
No corrosive effect on metal.

Oxidizing properties:
not fire-propagating

Chemical stability

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

Possibility of hazardous reactions

No hazardous reactions known.

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Conditions to avoid

Temperature: > 300 degrees Celsius
Avoid prolonged exposure to extreme heat.

Incompatible materials

No substances known that should be avoided.

Hazardous decomposition products

Decomposition products:

Hazardous decomposition products: carbon monoxide, hydrogen cyanide, caprolactam

Thermal decomposition products: caprolactam, The substances/groups of substances mentioned may be released during processing.

Thermal decomposition:

> 300 °C

May decompose if overheated and/or subjected to prolonged heating.

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.

Assessment other acute effects

No applicable information available.

Irritation / corrosion

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

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.

Aspiration Hazard

not applicable

Chronic Toxicity/Effects

Repeated dose toxicity

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

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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.

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.

Reproductive toxicity

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

Other Information

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

Medical conditions aggravated by overexposure

Data available do not indicate that there are medical conditions that are generally recognized as being aggravated by exposure to this substance/product. See SDS section 11 - Toxicological information.

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

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

Persistence and degradability

Assessment biodegradation and elimination (H₂O)

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

Bioaccumulative potential

Bioaccumulation potential

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

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.

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13. Disposal considerations

Container disposal:

Dispose of in accordance with national, state and local regulations. Packs must be completely emptied. Completely emptied packagings can be given for recycling.

14. Transport Information

Land transport

USDOT

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

Registration status:

Chemical TSCA, US

All substances are TSCA listed and active.
40 CFR 721.11621

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

State regulations

State RTK

NJ

PA

CAS Number

105-60-2

105-60-2

Chemical name

caprolactam

caprolactam

NFPA Hazard codes:

Health: 0

Fire: 1

Reactivity: 0

Special:

16. Other Information

SDS Prepared by:

BASF NA Product Regulations

SDS Prepared on: 2025/01/10

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