

Safety data sheet

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BASF Safety data sheet according to Regulation (EC) No. 1907/2006 as amended from time to time.

Date / Revised: 06.05.2025

Version: 1.0

Date / Previous version: not applicable

Previous version: none

Product: **Polystyrol 158 K**

(ID no. 30035310/SDS_GEN_IE/EN)

Date of print 07.10.2025

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Polystyrol 158 K

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: Polymer

Uses advised against: Use in medical devices and as /or rather in additives by the manufacturing of medical devices.

Recommended use: for industrial processing only

1.3. Details of the supplier of the safety data sheet

Company:

BASF SE
67056 Ludwigshafen
GERMANY

Contact address:

BASF Ireland DAC
Asgard House, 19-20 City Quay
Dublin, D02 K744
Ireland

Telephone: +353 21 451-7100

E-mail address: product-safety-uk-and-ireland@basf.com

1.4. Emergency telephone number

For products classified as hazardous in accordance with CLP:

National Poisons Information Centre, Beaumont Hospital, Dublin 9

Emergency medical information: 8am-10pm (seven days)

Tel.: 01 8092566

International emergency number:

Telephone: +49 180 2273-112

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SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

For the classification of the mixture the following methods have been applied: extrapolation on the concentration levels of the hazardous substances, on basis of test results and after evaluation of experts. The methodologies used are mentioned at the respective test results.

According to Regulation (EC) No 1272/2008 [CLP]

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

2.2. Label elements

According to Regulation (EC) No 1272/2008 [CLP]

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

2.3. Other hazards

According to Regulation (EC) No 1272/2008 [CLP]

Avoid dust development and deposition - dust explosion risk. Take precautionary measures against static discharges.

Product does not contain a substance above legal limits included in the list established in accordance with Article 59(1) of Regulation (EC) No 1907/2006 for having endocrine disrupting properties or is identified to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Chemical nature

Preparation based on:
polystyrene

CAS Number: 9003-53-6

SECTION 4: First-Aid Measures

4.1. Description of first aid measures

If inhaled:

After inhalation of decomposition products, remove the affected person to a source of fresh air and keep calm. Provide medical aid.

On skin contact:

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Areas affected by molten material should be quickly placed under cold running water. Burns caused by molten material require hospital treatment.

On contact with eyes:

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

On ingestion:

Rinse mouth and then drink 200-300 ml of water. If difficulties occur: Seek medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms: Eye irritation, skin irritation

4.3. Indication of any immediate medical attention and special treatment needed

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

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing media

Suitable extinguishing media:

water spray, dry powder, foam, carbon dioxide

Unsuitable extinguishing media for safety reasons:

water jet

5.2. Special hazards arising from the substance or mixture

Endangering substances: Carbon dioxide, carbon monoxide, styrene

Advice: The substances/groups of substances mentioned can be released in case of fire.

5.3. Advice for fire-fighters

Special protective equipment:

Wear a self-contained breathing apparatus.

Further information:

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

SECTION 6: Accidental Release Measures

High risk of slipping due to leakage/spillage of product.

6.1. Personal precautions, protective equipment and emergency procedures

Sources of ignition should be kept well clear. Avoid inhalation of dusts.

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6.2. Environmental precautions

Discharge into the environment must be avoided.

6.3. Methods and material for containment and cleaning up

Sweep/shovel up. Avoid raising dust. Ensure adequate ventilation.

6.4. Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

SECTION 7: Handling and Storage

7.1. Precautions for safe handling

Avoid inhalation of dusts. Ensure thorough ventilation of stores and work areas.

Protection against fire and explosion:

Avoid dust formation. Dust can form an explosive mixture with air. Provide exhaust ventilation. When the product is ground (chopped), dust explosion regulations should be noted.

7.2. Conditions for safe storage, including any incompatibilities

Suitable materials for containers: High density polyethylene (HDPE), Low density polyethylene (LDPE), Paper/Fibreboard

Further information on storage conditions: Protect against moisture. Avoid extreme heat. Avoid all sources of ignition: heat, sparks, open flame. The product must be stored according to the requirements of Regulation (EC) No 2023/2006. Contamination with other substances must be avoided. Storage together with other substances, especially hazardous substances, must be avoided. The substance/product may cake under the influence of moisture. Avoid direct sunlight.

7.3. Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters

Components with occupational exposure limits

Given suitable ventilation, it can be assumed that the threshold limits will not be reached.

100-42-5: styrene

TWA value 85 mg/m³ ; 20 ppm (OEL (IE))

STEL value 170 mg/m³ ; 40 ppm (OEL (IE))

Ceiling limit value/factor: 15 min

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(EU SCOEL)

Included in the regulation, but with no data values - See the regulation for further details

8.2. Exposure controls

Personal protective equipment

Respiratory protection:

Breathing protection if dusts are formed. Combination filter for gases/vapours of organic compounds and solid and liquid particles (f.e. EN 14387 Type A-P2)

Hand protection:

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

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

Avoid contact of molten material with skin. Avoid inhalation of dusts/mists/vapours. Eye wash fountains and safety showers must be easily accessible. Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

| | | |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| State of matter: | solid | |
| Form: | granules | |
| Colour: | The colour is derived from the trade name. | |
| Odour: | almost odourless | |
| Odour threshold: | not determined | |
| softening temperature: | > 90 °C | (DIN EN ISO 306) |
| onset of boiling: | The substance / product decomposes therefore not determined. | |
| Flammability: | May form flammable dust-air mixture. | |
| Lower explosion limit: | As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use. | |

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Upper explosion limit:

As a result of our experience with this product and our knowledge of its composition we do not expect any hazard as long as the product is used appropriately and in accordance with the intended use.

Flash point: > 280 °C

Auto-ignition temperature: > 400 °C (DIN 51794)

Thermal decomposition: approx. 300 °C

To avoid thermal decomposition, do not overheat.

pH value:

not soluble

Viscosity, dynamic:

not relevant

Thixotropy:

not thixotropic

Solubility in water:

insoluble

Partitioning coefficient n-octanol/water (log Kow):

not applicable

Vapour pressure:

not applicable

Relative density:

1.04

(20 °C)

Density:

approx. 1.04 g/cm³

(20 °C, 1 bar)

Relative vapour density (air):

not applicable, The product is a non-volatile solid.

9.2. Other information

Information with regard to physical hazard classes

Explosives

Explosion hazard: Product is not explosive, however a dust explosion could result from an air / dust mixture.

Oxidizing properties

Fire promoting properties: not fire-propagating

Other safety characteristics

Bulk density: approx. 600 kg/m³ (DIN 53466)
(20 °C, 1 bar)

Evaporation rate:

The product is a non-volatile solid.

SECTION 10: Stability and Reactivity

10.1. Reactivity

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

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10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

Accumulation of fine dust may entail the risk of a dust explosion in the presence of air.

10.4. Conditions to avoid

Avoid extreme heat. Avoid all sources of ignition: heat, sparks, open flame. Avoid dust formation.

10.5. Incompatible materials

Substances to avoid:
strong oxidizing agents

10.6. Hazardous decomposition products

Hazardous decomposition products:
monomers, oxides, gases/vapours, hydrocarbons, cyclic low molecular weight oligomers, Gaseous products of degradation can be given off if the product is greatly overheated.

SECTION 11: Toxicological Information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Assessment of acute toxicity:

Contact with molten product may cause thermal burns.

Irritation

Assessment of irritating effects:

No irritation is expected under intended use and appropriate handling.

Respiratory/Skin sensitization

Assessment of sensitization:

There is no evidence of a skin-sensitizing potential.

Germ cell mutagenicity

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:

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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.

Specific target organ toxicity (single exposure)

No data available.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

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.

Aspiration hazard

No data available.

Interactive effects

No data available.

11.2. Information on other hazards

Endocrine disrupting properties

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Other information

Other relevant toxicity 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.

SECTION 12: Ecological Information

12.1. 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.

12.2. Persistence and degradability

Assessment biodegradation and elimination (H₂O):

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The polymer component of the product is poorly biodegradable. The insoluble fraction can be removed by mechanical means in suitable waste water treatment plants.
In accordance with the required stability the product is not readily biodegradable. The product has not been tested. The statement has been derived from the structure of the product.

12.3. Bioaccumulative potential

Assessment bioaccumulation potential:
Discharge into the environment must be avoided.

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

12.4. Mobility in soil

Assessment transport between environmental compartments:
Adsorption in soil: Study scientifically not justified.

12.5. Results of PBT and vPvB assessment

The product does not fulfill the criteria for PBT (Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative).

12.6. Endocrine disrupting properties

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12.7. Other adverse effects

No data available.

Additional information

Other ecotoxicological advice:
No data can be given due to the product's insolubility in water.

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Must be disposed of or incinerated in accordance with local regulations.

Contaminated packaging:
Uncontaminated packaging can be recycled.

SECTION 14: Transport Information

Land transport

ADR

| | |
|------------------------------|----------------------------------------------------------------|
| | Not classified as a dangerous good under transport regulations |
| UN number or ID number: | Not applicable |
| UN proper shipping name: | Not applicable |
| Transport hazard class(es): | Not applicable |
| Packing group: | Not applicable |
| Environmental hazards: | Not applicable |
| Special precautions for user | None known |

RID

| | |
|------------------------------|----------------------------------------------------------------|
| | Not classified as a dangerous good under transport regulations |
| UN number or ID number: | Not applicable |
| UN proper shipping name: | Not applicable |
| Transport hazard class(es): | Not applicable |
| Packing group: | Not applicable |
| Environmental hazards: | Not applicable |
| Special precautions for user | None known |

Inland waterway transport

ADN

| | |
|-------------------------------|----------------------------------------------------------------|
| | Not classified as a dangerous good under transport regulations |
| UN number or ID number: | Not applicable |
| UN proper shipping name: | Not applicable |
| Transport hazard class(es): | Not applicable |
| Packing group: | Not applicable |
| Environmental hazards: | Not applicable |
| Special precautions for user: | None known |

Transport in inland waterway vessel

Not evaluated

Sea transport

IMDG

| | |
|-----------------------------|----------------------------------------------------------------|
| | Not classified as a dangerous good under transport regulations |
| UN number or ID number: | Not applicable |
| UN proper shipping name: | Not applicable |
| Transport hazard class(es): | Not applicable |

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| | |
|------------------------------|----------------|
| Packing group: | Not applicable |
| Environmental hazards: | Not applicable |
| Special precautions for user | None known |

Air transport

IATA/ICAO

| | |
|------------------------------|----------------------------------------------------------------|
| | Not classified as a dangerous good under transport regulations |
| UN number or ID number: | Not applicable |
| UN proper shipping name: | Not applicable |
| Transport hazard class(es): | Not applicable |
| Packing group: | Not applicable |
| Environmental hazards: | Not applicable |
| Special precautions for user | None known |

14.1. UN number or ID number

See corresponding entries for "UN number or ID number" for the respective regulations in the tables above.

14.2. UN proper shipping name

See corresponding entries for "UN proper shipping name" for the respective regulations in the tables above.

14.3. Transport hazard class(es)

See corresponding entries for "Transport hazard class(es)" for the respective regulations in the tables above.

14.4. Packing group

See corresponding entries for "Packing group" for the respective regulations in the tables above.

14.5. Environmental hazards

See corresponding entries for "Environmental hazards" for the respective regulations in the tables above.

14.6. Special precautions for user

See corresponding entries for "Special precautions for user" for the respective regulations in the tables above.

14.7. Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

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SECTION 15: Regulatory Information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Directive 2012/18/EU - Control of Major Accident Hazards involving dangerous substances (EU):

Listed in above regulation: no

Classification applies for standard conditions of temperature and pressure.

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

15.2. Chemical Safety Assessment

Chemical Safety Assessment not required

Product is not classified as hazardous.

A safety data sheet for this product is legally not required and is provided by us just as a courtesy to our customers.

SECTION 16: Other Information

Assessment of the hazard classes according to UN GHS criteria (most recent version)

Abbreviations

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road.
ADN = The European Agreement concerning the International Carriage of Dangerous Goods by Inland waterways. ATE = Acute Toxicity Estimates. CAO = Cargo Aircraft Only. CAS = Chemical Abstract Service. CLP = Classification, Labelling and Packaging of substances and mixtures. DIN = German national organization for standardization. DNEL = Derived No Effect Level. EC50 = Effective concentration median for 50% of the population. EC = European Community. EN = European Standards. IARC = International Agency for Research on Cancer. IATA = International Air Transport Association. IBC-Code = Intermediate Bulk Container code. IMDG = International Maritime Dangerous Goods Code. ISO = International Organization for Standardization. STEL = Short-Term Exposure Limit. LC50 = Lethal concentration median for 50% of the population. LD50 = Lethal dose median for 50% of the population. TLV = Threshold Limit Value. MARPOL = The International Convention for the Prevention of Pollution from Ships. NEN = Dutch Norm. NOEC = No Observed Effect Concentration. OEL = Occupational Exposure Limit. OECD = Organization for Economic Cooperation and Development. PBT = Persistent, Bioaccumulative and Toxic. PNEC = Predicted No Effect Level. PPM = Parts per million. RID = The European Agreement concerning the International Carriage of Dangerous Goods by Rail. TWA = Time Weight Average. UN-number = UN number at transport. vPvB = very Persistent and very Bioaccumulative.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification

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Vertical lines in the left hand margin indicate an amendment from the previous version.