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

1.1 Product identifier

Trade name: BendLay

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

General use: Polymer
For industrial processing only

1.3 Details of the supplier of the safety data sheet

Company name: Styrolution GmbH
Street/POB-No.: Erlenstraße 2
Postal Code, city: 60325 Frankfurt
Germany
WWW: www.styrolution.com
Dept. responsible for information:
Infopoint, Telephone: +49 (0) 2133 - 51- 4007
E-mail: infopoint.emea@styrolution.com

1.4 Emergency telephone number

Telephone: +44 (0) 1235 239 670

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to EC regulation 1272/2008 (CLP)

This mixture is classified as not hazardous.

Classification according to Directive 67/548/EEC or 1999/45/EC

This preparation is classified as not hazardous.

2.2 Label elements

Labelling (CLP)

Hazard statements: not applicable

Safety precautions: not applicable

Labelling (67/548/EEC or 1999/45/EC)

R phrase(s): not applicable

S phrase(s): not applicable

2.3 Other hazards

Dust: Can cause skin, eye and respiratory tract irritation.
Fine dust: explosive
The melted product can cause severe burns.
Swallowing may cause gastrointestinal irritation and pain of guts.

SECTION 3: Composition / information on ingredients

3.1 Substances: not applicable

3.2 Mixtures

Chemical characterization: Polystyrene mixture contains:
CAS No. 9003-55-8: Styrene-butadiene-copolymer contains:
CAS No. 9003-53-6: Polystyrene

SECTION 4: First aid measures

4.1 Description of first aid measures

After inhalation: Provide fresh air. Put victim at rest and keep warm. seek medical attention

In case of skin contact: The melted product can cause severe burns.
Do not remove the product from the skin without medical assistance.
After contact with molten product, cool skin area rapidly with cold water. Consult physician.

After eye contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Consult an eye specialist in the event of irritation.

After swallowing: Rinse mouth with water. Drink one or two glasses of water.
Never give an unconscious person anything through the mouth. seek medical attention

4.2 Most important symptoms and effects, both acute and delayed

Dust: Skin irritation, eye irritations and redness

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
(Decontamination, vital functions)

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:
Water fog, foam, extinguishing powder, carbon dioxide (CO_2).

Extinguishing media which must not be used for safety reasons:
Full water jet

5.2 Special hazards arising from the substance or mixture

In case of fire may be liberated: smoke, carbon monoxide and carbon dioxide (CO_2).
In case of dust (Fine dust): danger of dust explosion

5.3 Advice for firefighters

Special protective equipment for firefighters:
Wear a self-contained breathing apparatus and chemical protective clothing.

Additional information: Hazchem-Code: -
Do not allow fire water to penetrate into surface or ground water. Fire residuals and contaminated extinguishing water must be disposed of in accordance with the regulations of the local authorities.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Provide adequate ventilation.
Wear personal protection equipment. Do not breathe dust.

6.2 Environmental precautions

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

6.3 Methods and material for containment and cleaning up

Take up mechanically. Collect in closed containers for disposal.
Avoid generation of dust. Remove all sources of ignition. Provide adequate ventilation.

Additional information: Special danger of slipping by leaking/spilling product.

6.4 Reference to other sections

Refer additionally to chapter 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on safe handling: Provide adequate ventilation, and local exhaust as needed. Do not breathe dust.
In the case of the formation of dust: Withdraw by suction.
Molten material: Avoid contact with the substance.

Precautions against fire and explosion:
Take precautionary measures against static discharge. Keep away from sources of ignition.
Use grounding equipment. Use explosion-proof equipment and non-sparking tools/utensils.
Avoid open flames.
In case of dust (fine dust): danger of dust explosion

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:
Store in a well-ventilated place. Keep container tightly closed.
Protect against heat /sun rays.

Storage class: 11 = Combustible solids

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
	Styrolux®	Great Britain: WEL-TWA	10 mg/m³ Dust limit value inhalable fraction
		Great Britain: WEL-TWA	4 mg/m³ Dust limit value respirable fraction
		Ireland: 8 hours	10 mg/m³ Dust limit value inhalable fraction
		Ireland: 8 hours	4 mg/m³ Dust limit value respirable fraction
100-42-5	Styrene	Great Britain: WEL-STEL	1.080 mg/m³; 250 ppm
		Great Britain: WEL-TWA	430 mg/m³; 100 ppm
		Ireland: 15 minutes	170 mg/m³; 40 ppm
		Ireland: 8 hours	85 mg/m³; 20 ppm
106-99-0	1,3-Butadiene	Great Britain: WEL-TWA	22 mg/m³; 10 ppm (Carc)
		Ireland: 8 hours	2,2 mg/m³; 1 ppm C1, Mut2

8.2 Exposure controls

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

Occupational exposure controls

Respiratory protection: Respiratory protection must be worn whenever the WEL levels have been exceeded.
Use filter type A-P2 according to EN 14387.

Hand protection: Protective gloves according to EN 374.
Glove material: Nitrile rubber - Layer thickness: 0,11 mm.
Breakthrough time: >480 min.
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

In case of melting: Protective gloves against heat according to EN 407.
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Eye protection: Tightly sealed goggles according to EN 166.

Body protection: Wear suitable protective clothing.

General protection and hygiene measures:

Molten material: Avoid contact with skin.
Do not inhale dust particles or vapours. Keep away from sources of ignition.
Wash hands before breaks and after work.

In case of dust: Particular danger of slipping when spread on the ground.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance: Physical state: solid, granulate
Colour: colourless, clear

Odour: weak, characteristic

Odour threshold: No data available

pH value: No data available

Melting point/melting range: > 30 °C (DIN EN ISO 306)

Boiling temperature/boiling range: No data available

Flash point/flash point range: > 280 °C

Vapourisation rate: No data available

Flammability: No data available

Explosive properties:	Dust explosion risk at fine dust
Explosion limits:	No data available No data available
Vapour pressure:	No data available
Vapour density:	No data available
Density:	at 20 °C: approx. 1,05 g/cm³ (DIN 53479)
Water solubility:	insoluble
Partition coefficient n-octanol/water:	No data available
Autoflammability:	No data available
Thermal decomposition:	approx. 300 °C
Viscosity, dynamic:	No data available
Explosive properties:	No data available
Oxidizing characteristics:	Oxidising potential: not oxidising

9.2 Other information

Ignition temperature:	> 400 °C (DIN 51794)
Bulk density:	at 20 °C: approx. 640 kg/m³ (DIN 53466)
Additional information:	No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

refer to 10.3

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

In case of dust (Fine dust): danger of dust explosion

10.4 Conditions to avoid

Keep away from open flames, hot surfaces and sources of ignition.
Avoid dust formation.

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

In case of fire may be liberated: smoke, carbon monoxide and carbon dioxide (CO2).

Thermal decomposition: approx. 300 °C

SECTION 11: Toxicological information

11.1 Information on toxicological effects

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. not to be expected
Eye damage/irritation: Lack of data. not to be expected
Sensitisation to the respiratory tract: Lack of data.
Skin sensitisation: Lack of data. not to be expected
Germ cell mutagenicity/Genotoxicity: Lack of data. not to be expected
Carcinogenicity: Lack of data. not to be expected
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. not to be expected
Aspiration hazard: Lack of data.

Other information: When handled appropiately, even after long years of experience with this product, no adverse health effects are known.

Styrene: Harmful if inhaled. Causes damage to organs through prolonged or repeated exposure. lung damages
May be fatal if swallowed and enters airways.
Causes serious eye irritation. Causes skin irritation.

1,3-Butadiene: May cause cancer. May cause genetic defects.

Symptoms

Dust: Can cause skin, eye and respiratory tract irritation.
The melted product can cause severe burns.
Thermal treatment, Processing:
Irritating to eyes, respiratory system and skin.
In case of ingestion: Swallowing may cause gastrointestinal irritation and pain of guts.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: no evidence of aquatic toxicity

Water Hazard Class: nwg = non-hazardous to water (WGK catalog number 766)

12.2. Persistence and degradability

Further details: Biodegradation: Product is not readily biodegradable.
The product is likely to persist in the environment.

Effects in sewage plants: In sewage treatment plants it may be separated mechanically.

12.3 Bioaccumulative potential

To avoid bioaccumulation plastics should not be disposed in the sea or in other water environments.

Partition coefficient n-octanol/water:
No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

12.6 Other adverse effects

General information: Do not allow to enter into ground-water, surface water or drains.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste key number: 07 02 99 = wastes from the MFSU of plastics, synthetic rubber and man-made fibres
MFSU = manufacture, formulation, supply and use

Recommendation: With due observance of the regulations laid down by the local authorities, this must be brought to a suitable incineration plant/waste disposal site.

Contaminated packaging

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

SECTION 14: Transport information

14.1 UN number

not applicable

14.2 UN proper shipping name

ADR/RID, IMDG, IATA: Not restricted

14.3 Transport hazard class(es)

not applicable

14.4 Packing group

not applicable

14.5 Environmental hazards

Marine pollutant No

14.6 Special precautions for user

No dangerous good in sense of these transport regulations.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No data available

SECTION 15: Regulatory information

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

National regulations - Great Britain

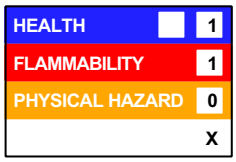
Hazchem-Code: -

National regulations - USA

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



National regulations - Canada

DSL: Listed

15.2 Chemical Safety Assessment

For this substance a chemical safety assessment is not required.

SECTION 16: Other information

Further information

Reason of change: Changes in section 1: product name
Date of first version: 25.02.2013

Department issuing data sheet

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

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.