

# Safety Data Sheet

## STYROPEK® BFL Series

Revision date : 05/31/2018  
Version: 3.0

Page: 1/10  
(2018-USA/ENG-BFL2V3.0)

### 1. Identification

#### Product identifier used on the label

### STYROPEK® BFL Series (BFL 295, BFL 395, BFL 397, BFL 397S, BFL 495)

#### Recommended use of the chemical and restriction on use

Recommended use\*: for industrial processing only; Expanding-agent containing plastic for the production of foam plastics

\* The "Recommended use" identified for this product is provided solely to comply with a US 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:  
Styropek México SA de CV  
Fernando Montes de Oca 71  
Col. Condesa, C.P. 06140,  
Ciudad de México, México  
Telephone: +52 55 9140 0523

#### Manufacturer / importer:

STYROPEK S.A. DE C.V.

#### Emergency telephone number

24 Hour Emergency Response Information  
SETIQ Mexico 01 800 0021400  
CHEMTREC: 01 800 424-9300  
832-446-6154 (in USA)  
Int.: +1-703-527-3887

Altamira Plant (01833) 500 24 00 EXT: (3934) , (3910)  
Available 24 Hours

#### Other means of identification

<b>Chemical name:</b>	Polystyrene
<b>Commercial name:</b>	Styropek BF
<b>Chemical family:</b>	Polymer
<b>Synonyms:</b>	Expandable Polystyrene

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### 2. Hazards Identification

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

# Safety Data Sheet

## STYROPEK® BFL Series

Revision date : 05/31/2018  
Version: 3.0

Page: 2/10  
(2018-USA/ENG-BFL2V3.0)

### Classification of the product

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

### Label elements

Hazard Statement:

EUH018	In use may form flammable/explosive vapour-air mixture.
	Precautionary Statement:
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P243	Take precautionary measures against static discharge.
P403 + P235	Store in a well-ventilated place. Keep cool.

### Hazards not otherwise classified

May cause some eye irritation which should cease after removal of the product.

Labeling of special preparations (GHS):

Product releases a flammable hydrocarbon.

**According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200**

### Emergency overview

WARNING:

FLAMMABLE.

Releases flammable vapour.

MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.

PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION. CONTAINS MATERIAL WHICH MAY CAUSE KIDNEY DAMAGE BASED ON ANIMAL DATA.

Eye wash fountains and safety showers must be easily accessible.

Use with local exhaust ventilation.

Avoid contact with the skin, eyes and clothing.

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### 3. Composition / Information on Ingredients

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

CAS Number	Content (W/W)	Chemical name
78-78-4	>= 0.3 - < 3.0 %	isopentane
109-66-0	>= 3.0 - < 7.0 %	Pentane
78169-20-7	>= 0.2 - < 1.0 %	Polymeric FR

# Safety Data Sheet

## STYROPEK® BFL Series

Revision date : 05/31/2018  
Version: 3.0

Page: 3/10  
(2018-USA/ENG-BFL2V3.0)

### According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

CAS Number	Content (W/W)	Chemical name
9003-53-6	>= 92.0 %	polystyrene
109-66-0	<= 6.0 %	Pentane
78-78-4	<= 1.5 %	isopentane

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## 4. First-Aid Measures

### Description of first aid measures

#### General advice:

Remove contaminated clothing.

#### If inhaled:

Remove the affected individual into fresh air and keep the person calm. If difficulties occur: Seek medical attention.

#### If on skin:

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:

No hazards anticipated. Rinse mouth and then drink plenty of water. If difficulties occur: Seek medical attention.

### Most important symptoms and effects, both acute and delayed

Symptoms: headache, dizziness, incoordination, dazed state, Eye irritation, skin irritation

### Indication of any immediate medical attention and special treatment needed

#### Note to physician

Treatment: Treat according to the symptoms under clinical conditions.

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## 5. Fire-Fighting Measures

### Extinguishing media

Suitable extinguishing media:

dry powder, water spray, carbon dioxide, foam

### Special hazards arising from the substance or mixture

Hazards during fire-fighting:

Substance/product is dangerous when exposed to heat or flames.

# Safety Data Sheet

## STYROPEK® BFL Series

Revision date : 05/31/2018  
Version: 3.0

Page: 4/10  
(2018-USA/ENG-BFL2V3.0)

### Advice for fire-fighters

Protective equipment for fire-fighting:

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

### Further information:

When large quantities of solid substance/product are involved, melting may occur, in which condition, application of water may cause extensive scattering of molten material. Dense smoke produced during combustion may obscure vision. To prevent re-ignition of interior, target center of fire with large amounts of water. Vapours are heavier than air and may accumulate in low areas and travel a considerable distance up to the source of ignition.

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## 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

Sources of ignition should be kept well clear. Extinguish sources of ignition nearby and downwind. Avoid dust formation. Avoid inhalation. Ensure adequate ventilation. Wear appropriate respiratory protection.

### Environmental precautions

Discharge into the environment must be avoided. Do not release untreated into natural waters.

### Methods and material for containment and cleaning up

Sweep/shovel up. Avoid raising dust. Ensure adequate ventilation. Place into suitable containers for reuse or disposal in a licensed facility. After decontamination, spill area can be washed with water.

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## 7. Handling and Storage

### Precautions for safe handling

Upon delivery, trailer and/or container should be opened and allowed to vent for a minimum of one (1) hour before unloading. The substance/product in bead or expanded form generates static charges during handling which are difficult to dissipate due to the insulating properties. Take precautionary measures against static discharges. Containers should be opened carefully in wellventilated areas to avoid static discharge. Maintain air circulation and ventilation at a minimum rate of six air changes per hour to prevent the formation of flammable concentrations.

Protection against fire and explosion:

Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy. Substance/product is capable of accumulating a static charge which could act as an ignition source. Wear non-sparking safety shoes. Ground conductive equipment properly to prevent electrostatic discharge. Vapours are heavier than air and may accumulate in low areas and travel a considerable distance up to the source of ignition. Higher line velocity can increase the build-up of static electric charge.

# Safety Data Sheet

## STYROPEK® BFL Series

Revision date : 05/31/2018  
Version: 3.0

Page: 5/10  
(2018-USA/ENG-BFL2V3.0)

### Conditions for safe storage, including any incompatibilities

Segregate from strong oxidizing agents.

Storage stability:

Maintain relative humidity at 40% to minimize static accumulation.

Avoid prolonged storage at high temperatures.

**CAUTION:** IMDG code: class 3  
UN No. 2211  
Polystyrene beads,  
expandable, cont.: Pentane  
emitting flammable vapours.

**PRECAUCIÓN:** LEA CUIDADOSAMENTE Y OBSERVE  
ANTES DE LA APERTURA, DURANTE LA  
VENTILACION DURANTE LA DESCARGA

**NO SMOKING**  **NO FUMAR**

**NO FIRE/  
NAKED LIGHT**  **NO FUEGO/  
NO FUEGO  
ABIERTO**

**NO WELDING**  **NO SOLDAR**

**NO SPARKS  
FROM TOOLS**  **NO CHISPAS DE  
HERRAMIENTAS**

**BEFORE UNLOADING  
KEEP DOORS OPEN  
AND VENTILATE FOR  
1 HOUR**   **ANTES DE DESCARGAR  
MANTENGA LAS PUERTAS  
ABIERTAS Y VENTILE  
POR 1 HORA**

## 8. Exposure Controls/Personal Protection

### Components with occupational exposure limits

Pentane	Exposure limits	TWA value 600 ppm 1,800 mg/m <sup>3</sup> ; STEL value 760 ppm 2,250 mg/m <sup>3</sup> ;
	NIOSH	REL value 120 ppm 350 mg/m <sup>3</sup> ; Ceil_Time
	Pocket Guide to Chemical Hazards (US)	610 ppm 1,800 mg/m <sup>3</sup> ;

### Advice on system design:

Provide local exhaust ventilation to control vapours/mists.

# Safety Data Sheet

## STYROPEK® BFL Series

Revision date : 05/31/2018  
Version: 3.0

Page: 6/10  
(2018-USA/ENG-BFL2V3.0)

### Personal protective equipment

#### **Respiratory protection:**

Respiratory protection may not be required under normal operating conditions if adequate ventilation is provided. Wear respiratory protection if ventilation is inadequate. Breathing protection if dusts are formed.

#### **Hand protection:**

non-static gloves (e.g. of leather)

#### **Eye protection:**

Tightly fitting safety goggles (chemical goggles).

#### **Body protection:**

Anti-static protective clothing, Antistatic safety shoes

#### **General safety and hygiene measures:**

Avoid contact with the skin, eyes and clothing. 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.

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## 9. Physical and Chemical Properties

Form:	beads	
Odour:	of pentane	
Colour:	white	
pH value:		not soluble
softening point:	approx. 71 °C	
onset of boiling:		The substance / product decomposes therefore not determined.
Sublimation point:		No applicable information available.
Flash point:	79 - 85 °C	(ASTM D3278)
Flammability:	not highly flammable	(UN Test N.1 (ready combustible solids))
Flammability of Aerosol Products:		not applicable, the product does not form flammable aerosoles)
Lower explosion limit:	1.4 %(V)	(air)
Upper explosion limit:	8.3 %(V)	(air)
Autoignition:	285 °C	(DIN 51794)
Vapour pressure:		not applicable
Density:	approx. 1.02 – 1.05 g/cm <sup>3</sup>	(20 °C)
Bulk density:	approx. 640 kg/m <sup>3</sup>	(20 °C)
Vapour density:		Heavier than air.
Partitioning coefficient noctanol/water (log Pow):		not applicable
Self-ignition temperature:		not self-igniting
Thermal decomposition:		No applicable information available.
Viscosity, kinematic:		No applicable information available.
Solubility in water:		not soluble

# Safety Data Sheet

## STYROPEK® BFL Series

Revision date : 05/31/2018  
Version: 3.0

Page: 7/10  
(2018-USA/ENG-BFL2V3.0)

Miscibility with water:	immiscible
Solubility (quantitative):	No applicable information available.
Solubility (qualitative):	soluble
Evaporation rate:	solvent(s): aromatic hydrocarbons, organic solvents, ketones, The product is a non-volatile solid.

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## 10. Stability and Reactivity

### Reactivity

No applicable information available.

Corrosion to metals:

No corrosive effect on metal.

Oxidizing properties:

Not an oxidizer.

### Chemical stability

No applicable information available.

### Possibility of hazardous reactions

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

### Conditions to avoid

Avoid all sources of ignition: heat, sparks, open flame. Avoid electro-static discharge.

### Incompatible materials

strong oxidizing agents, aromatic solvents

### Hazardous decomposition products

Decomposition products:

Possible thermal decomposition products: gases/vapours, monomers, cyclic low molecular weight oligomers, oxides, hydrocarbons

Thermal decomposition:

No applicable information available.

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## 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

# Safety Data Sheet

## STYROPEK® BFL Series

Revision date : 05/31/2018  
Version: 3.0

Page: 8/10  
(2018-USA/ENG-BFL2V3.0)

Assessment of acute toxicity: Contact with molten product may cause thermal burns.

*Information on: isopentane*

*Assessment of acute toxicity: Aspiration may result in chemical pneumonitis, which may be fatal.*

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Oral

Type of value: LD50

Value: > 2,000 mg/kg

Inhalation

Type of value: LC50

Value: > 5 mg/l

Dermal

Type of value: LD50

Value: > 2,000 mg/kg

Irritation / corrosion

Assessment of irritating effects: Frequent and prolonged contact can lead to skin irritation.

*Information on: Sulfonium compounds, C11-14-alkylbis(hydroxyethyl), 2-hydroxyethyl sulfates (salts)*

*Assessment of irritating effects: Corrosive! Damages skin and eyes.*

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Skin

Prolonged contact with the product can result in skin irritation.

Eye

Similar findings as for skin apply to eyes.

Sensitization

Assessment of sensitization: There is no evidence of a skin-sensitizing potential.

Result: Non-sensitizing.

### Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: The substance is inert.

*Information on: isopentane*

*Assessment of repeated dose toxicity: Chronic overexposure has been shown to cause adverse kidney effects in experimental animals.*

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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.



# Safety Data Sheet

## STYROPEK® BFL Series

Revision date : 05/31/2018  
Version: 3.0

Page: 9/10  
(2018-USA/ENG-BFL2V3.0)

### 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

*Information on: Pentane*  
*Has a degreasing effect on skin.*

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### **Symptoms of Exposure**

Headache, dizziness, incoordination, dazed state, Eye irritation, skin irritation

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## **12. Ecological Information**

### **Toxicity**

Aquatic toxicity

*Information on: Pentane*

*Assessment of aquatic toxicity:*

*Acutely toxic for aquatic organisms.*

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### **Persistence and degradability**

Assessment biodegradation and elimination (H<sub>2</sub>O)

On the basis of the data available concerning eliminability/degradation and bioaccumulation potential, longer-term harm to the environment is improbable.

Elimination information

Non-biodegradable.

### **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:

Because of the product's consistency and low water solubility, bioavailability is improbable.

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## **13. Disposal considerations**

**Waste disposal of substance:**

# Safety Data Sheet

## STYROPEK® BFL Series

Revision date : 05/31/2018  
/10  
Version: 3.0

Page: 10

(2018-USA/ENG-BFL2V3.0)

Dispose of in accordance with national, state and local regulations. Do not discharge into waterways or sewer systems without proper authorization.

### Container disposal:

Dispose of in accordance with national, state and local regulations. Uncontaminated packaging can be recycled. Contact manufacturer regarding recycling.

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## 14. Transport Information

### Land transport

TDG

Hazard class: 9  
Packing group: III  
ID number: UN 2211  
Hazard label: 9  
Proper shipping name: POLYMERIC BEADS, EXPANDABLE

### Sea transport

IMDG

Hazard class: 9  
Packing group: III  
ID number: UN 2211  
Hazard label: 9  
Marine pollutant: NO  
Proper shipping name: POLYMERIC BEADS, EXPANDABLE

### Air transport

IATA/ICAO

Hazard class: 9  
Packing group: III  
ID number: UN 2211  
Hazard label: 9  
Proper shipping name: POLYMERIC BEADS, EXPANDABLE

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## 15. Regulatory Information

### Federal Regulations

Not applicable

### NFPA Hazard codes:

Health : 1      Fire: 2      Reactivity: 0      Special:

### HMIS III rating

Health: 1      Flammability: 2      Physical hazard:0

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# Safety Data Sheet

## STYROPEK® BFL Series

Revision date : 05/31/2018  
/10  
Version: 3.0

Page: 11

(2018-USA/ENG-BFL2V3.0)

### 16. Other Information

#### SDS Prepared by:

Styropek Product Regulations

SDS Prepared on: 05/31/2018

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