

Safety Data Sheet

STYROPEK® CHF SERIES

Revision date: 07/02/2024

Version: 1.0

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1. Identification

Product identifier

STYROPEK® CHF SERIES

Recommended use and restriction on use:

Recommended use: for industrial processing only; expanding-agent containing plastic to produce 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 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 Chile S.P.A.

Camino a Quintero N°201 Quintero, Valparaíso, Chile

SDS Information Email: product.stewardship@styropek.com

Telephone: +56 32 2609300

Manufacturer / Importer: Styropek Chile S.P.A.

Emergency telephone number

24 Hour Emergency Response Information:

+56 9 42836720

+56 32 2609316

Other means of identification

Chemical name:	Polystyrene
Commercial name:	Styropek CHF Series
Chemical family:	Polymer
Synonyms:	Expandable Polystyrene

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2. Hazard(s) identification

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

Hazard Classification Not classified.

Label Elements

Hazard symbol: No symbol.

Signal word: No signal word.

Hazard statement: Not applicable.

Precautionary Statements

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.

Other hazards which do not result in GHS classification

In use may form flammable/explosive vapor-air mixture. Product releases pentane, a flammable vapor. Maintain adequate ventilation during processing and use. High concentration of airborne powders or dust may form explosive mixture with air. May cause some eye irritation which should cease after removal of the product.

Warning: Flammable. Releases flammable vapor. 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

Chemical name	CAS number	Content (w/w)
Isopentane	78-78-4	>= 0.3 - < 3.0 %
Pentane	109-66-0	>= 3.0 - < 7.0 %
Flame retardant	97416-84-7	>= 0.2 - < 1.0 %

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

Chemical name	CAS number	Content (w/w)
Polystyrene	9003-53-6	>= 92.0 %
Pentane	109-66-0	<= 6.0 %
Isopentane	78-78-4	<= 1.5 %

4. First-Aid measures

General advice:	Remove contaminated clothing.
Ingestion:	No hazards anticipated. Rinse mouth and then drink plenty of water. If difficulties occur: Obtain medical attention.
Skin contact:	Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.
Eyes contact:	In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. If irritation develops, seek medical attention.
Inhaled:	Remove the affected individual into fresh air and keep the person calm. If difficulties occur: Seek medical attention.

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Most important symptoms/effects, acute and delayed

Symptoms: Headache, dizziness, incoordination, dazed state, eye irritation, skin irritation. Hazards: No hazards anticipated.

Indication of immediate medical attention and special treatment needed

Treatment: Treat according to the symptoms under clinical conditions.

5. Fire-fighting measures

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Dry powder, water spray, carbon dioxide, foam.

Hazards during fire-fighting: Substance/product is dangerous when exposed to heat or flame.

Special protective equipment and precautions for firefighters

Special protective equipment for firefighters: 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. Vapors are heavier than air and may accumulate in low areas and travel a considerable distance up to the source of ignition.

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.

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.

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

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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 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 well-ventilated 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 can accumulate 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.
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.

8. Exposure controls and personal protection

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
n-Pentane	TWA	600 ppm 1800 mg/m ³	NIOS Pocket Guide to Chemical Hazards (US)
	STEL	760 ppm 2250 mg/m ³	
	REL	120 ppm 350 mg/m ³	
	Ceil Time	610 ppm 1800 mg/m ³	

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General information:	Personal protective equipment (PPE) should not be considered a long-term solution to exposure control. Employer programs to properly select, fit, maintain and train employees to use equipment must accompany PPE. Consult a competent industrial hygiene resource, the PPE manufacturer's recommendation, and/or applicable regulations to determine hazard potential and ensure adequate protection.
Advice on system design:	Provide local exhaust ventilation to control vapors/mists.
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.
Hygiene measures:	Avoid inhalation of dust and vapors. Use effective control measures and PPE to maintain worker exposure to concentrations that are below these limits. Provide eyewash station and safety shower. Provide for sufficient ventilation. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

9. Physical and chemical properties

Physical state:	Solid
Form:	Beads
Color:	White
Odor:	Pentane
pH:	Not applicable
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:	Not applicable, the product does not form flammable aerosols
Lower explosion limit:	1.4 %(V) (air)
Upper explosion limit:	8.3 %(V) (air)
Autoignition:	285 °C (DIN 51794)
Density:	Approx. 1.02 – (20 °C), 1.05 g/cm ³
Bulk density:	Approx. 640 kg/m ³ (20 °C)
Vapor density:	Heavier than air
Vapor pressure:	Not applicable
Miscibility in water:	Immiscible

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Solubility in water:	Not soluble
Solubility (quantitative):	No applicable information available
Solubility (qualitative):	Soluble. Solvent(s): aromatic hydrocarbons, organic solvents, ketones
Partition coefficient (n-octanol/water) (log Pow):	Not applicable
Thermal decomposition:	No applicable information available.
Auto-ignition temperature:	Not self-ignition
Viscosity, kinematic:	No applicable information available.
Evaporation rate:	The product is a non-volatile solid

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 electrostatic discharge.
Incompatible materials:	Strong oxidizing agents, aromatic solvents.
Hazardous decomposition products:	Possible thermal decomposition products: gases/vapors, monomers, cyclic low molecular weight oligomers, oxides, hydrocarbons.
Thermal decomposition:	No applicable information available.

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.
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Acute toxicity (list all possible routes of exposure)

Assessment of acute toxicity: Specified substance(s):	Contact with molten product may cause thermal burns.
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Isopentane	Aspiration may result in chemical pneumonitis, which may be fatal.
Oral:	Type of value: LD50 Value: > 2,000 mg/kg
Dermal:	Type of value: LD50 Value: > 2,000 mg/kg
Inhalation:	Type of value: LC50 Value: > 5 mg/L
Irritation/Corrosion	Frequent and prolonged contact can lead to skin irritation.
Skin:	Prolonged contact with the product can result in skin irritation.
Serious eye damage/Eye irritation:	Similar findings as for skin apply to eyes.
Sensitization:	There is no evidence of a skin-sensitizing potential.
Chronic Toxicity/Effects	
Repeated dose toxicity:	
Specified substance(s):	
Isopentane	Chronic overexposure has been shown to cause adverse kidney effects in experimental animals.
Genetic 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.
Reproductive 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:	
Specified substance(s):	
Pentane	Has a degreasing effect on skin.
Symptoms of exposure:	Headache, dizziness, incoordination, dazed state, eye irritation, skin irritation.

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12. Ecological information

Toxicity

Aquatic toxicity:

Specified substance(s):

Pentane Acutely toxic for aquatic organisms.

Persistence and degradability

Assessment biodegradation and elimination (H₂O):

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

Bioaccumulative potential:

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

Additional information:

Add. remarks environmental fate & pathway: Because of the product's consistency and low water solubility, bioavailability is improbable.

13. Disposal considerations

Waste disposal of substance:

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.

14. Transport information

TDG

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

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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IMDG

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

15. Regulatory information

For regulatory information please consult the product regulatory data sheet.

16. Other information

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care® is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products. Although the information contained in this document is presented in good faith, based on available information believed to be reliable at the time of preparation of this document, it is provided for your guidance only. Because many factors may affect processing or application/use, we recommend that you make tests to determine the suitability of our products for your particular purpose prior to use. Styropek makes no warranties or representations with respect to the information, or the product/materials described herein, and expressly disclaims all implied warranties and conditions (including all warranties and conditions of merchantability or fitness for a particular purpose). No freedom from infringement of any patent owned by Styropek or others is to be inferred. In no case shall the descriptions, information, data or designs provided be considered a part of our terms and conditions of sale. Unless specifically agreed otherwise, Styropek does not take responsibility for use, transportation, storage, handling or disposal of the product/materials described herein. This information is subject to change without notice. Please contact Styropek for the most current version of this SDS.