Technical Leaflet

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Peripek®

Styropek

Application

For the production of mouldings primarily in the high bulk density range for applications involving stresses due to compression and moisture (Table 1).

Fire characteristics in conformity with UL-94 (flame-retardant testing) when used as an insulating material.

Description

Peripek® is an Expandable Polystyrene (EPS) with uniformly distributed flame retardant (blowing agent: pentane). Containing approximately 3.45 – 3.65 wt% of the blowing agent. All products supplied as spherical beads with a bulk density of approximately 40 pcf (640 kg/m^3).

Peripek® do not contain chlorofluorocarbons and hydrofluorocarbons compounds.

Regulatory Compliance

EPS foams manufactured from **Peripek®** comply with surface burning characteristics (ASTM E-84) and physical property (ASTM C- 578) requirements of U.S. model building codes. National Evaluation Service report NER-479 and ICC Evaluation Service report ESR-1498 contain specific code compliance criteria for **Peripek®**.

Packaging and Storage

Peripek® products packaged in flexible super bags of 800 kg. (1763 pounds). Plastic liners used to maintain product shelf life by retaining the blowing agent.

Peripek® products should be stored indoor in a cool place (maximum temperature 80°F or 27 °C). In the unopened bulk containers, the typical shelf life after receipt is 90 days.

Table 1

Product	Water Absorption at density 22g/L
Peripek®	< 2%
Styropek® BFL	< 3%

Table 2: Thechnical Products Specifications

Product	%Pentane	ppm Monomer	Bead size	
Peripek® FL 200	**3.45 – 3.65%**	**< 1000 ppm**	**0.85 – 1.70 mm**	**97% min**
Peripek® FL 300	**3.45 – 3.65%**	**< 1000 ppm**	**0.60 – 1.25 mm**	**97% min**

The containers should protected from rain, snow, frost, direct sunlight and mechanical damage.

Bags that been opened should use as soon as possible or these bags must be tightly closed (hermetically protected). Otherwise, the material could have physical or chemical issues

Processing

Polystyrene foams made from **Peripek®** products produced in three stages: pre-expansion, intermediate aging and molding. Full details given in the Technical Handbook.

Pre-Expansion

The minimum density achievable depends on the pre-expansion equipment and technique used.

Peripek® products should be processing in batch pre-expander and can reach bulk densities shown in Table 3.
The pressure in pre-expansion should be 0.35 to 0.50 bar. Care should taken during expansion, as prolonged steam times will result in excessive loss of pentane and difficulty in achieving acceptable fusion during molding.

Tabla 3

Product	Typical expanded density range
Peripek® FL200	20 - 40 kg/m^3 (1.49 – 2.49 lb/ft^3)
Peripek® FL300	25 – 40 kg/m^3 (1.56 – 2.49 lb/ft^3)

Intermediate aging

The intermediate aging time should be selected in dependence on the bulk density, the ambient temperature and the intended application.

Moulding

These products are intended for moulding on automatic and manual molding machines, with or without vacuum. Molding can be accomplished under a wide range of conditions and densities. The typical pressures of molding are majors than **Styropek®** products with regular contents of pentane.

Special Characteristics

Low-pentane products for the production of expanded foams with low after shrinkage. Mouldings of **Peripek®** are not suitable for use in direct contact with foodstuffs.

Safety

It is to be noted that flammable mixtures of blowing agent (pentane) and air can arise in the storage and processing of **Peripek®** and of the expanded foams manufactured from it due to the diffusion of blowing agent.

Peripek® products and the finished foam products should not be exposed to ignition sources (including naked flame, sparks, or electrostatic charges) during storage, processing, shipment and application.

Adequate ventilation in all processing areas must be provided to prevent hazardous accumulations of hydrocarbon vapors.

For complete safety precautions and recommendations, refer to the Material Safety Data Sheets (MSDS) and the Technical Handbook.

Biological effects

EPS foams manufactured from **Peripek®** products do not serve as food to animals nor have a nutritional value to microorganisms such as fungus and bacteria. None of its compounds are water soluble and do not emit hydro soluble substances that pollute underground water. In the dumping ground they do not decompose nor form any polluting substances.

Peripek® products are 100% recyclable.

Chemical effects

The chemical resistance of **Peripek®** products can be found in our Technical Handbook. Extended exposure to ultraviolet light may cause the EPS foam to turn yellowish and the surface to become brittle.

Observations

IMPORTANT: The information submitted in this publication is based on STYROPEK, S.A. DE C.V. and our technologist current knowledge and experience. In view of the many factors that may affect processing and application, this data does not relieve molders from the responsibility of carrying out their own tests and experiments; neither does it imply any legally binding assurance of certain properties or of suitability for a specific purpose. It is the responsibility of those to whom we supply our products to ensure that any existing laws and legislation as well as proprietary rights, which STYROPEK S.A DE C.V. is holder.

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