

# SUNPOR<sup>®</sup> A 423

Technical Notice

H-21-TM – 423 Status : 02

SUNPOR<sup>®</sup> A 423 is an expandable polystyrene granulate (EPS) which can be processed into moulded foam parts.

## Applications:

SUNPOR<sup>®</sup> A 423 is recommended for mass production of shape mouldings where shortest cycle times are essential. Because of its small bead size SUNPOR<sup>®</sup> A 423 can be used for contour mouldings with a wall thickness of less than 10 mm.

Properly processed EPS foam packaging made from SUNPOR<sup>®</sup> A 423 provides good mould filling properties and high mechanical strength. It is not hygroscopic, and it does not become friable in low temperatures.

Moulded EPS packaging parts have to act as shock absorbers and cushion their content against blows from outside, i.e they have to absorb the energy released in an impact.

The mainly closed cell structure of moulded foam parts made from SUNPOR<sup>®</sup> A 423 absorbs the impact stress as "deformation work". In this process the air enclosed in the cells is first compressed, while bigger impact forces may also deform or crack the cell walls.

Strength requirements, as well as testing and dimensioning, of EPS packaging are described in DIN 55471.

## Density range:

18 - 30 kg/m<sup>3</sup>

## Granulate geometry:

SUNPOR<sup>®</sup> A 423 is supplied as a bead-shaped granulate.

Granulate diameter:

0.3 - 0.8 mm (> 90% by weight)

## Pentane content:

> 5.0% by weight (at the time of packaging)

## Water content:

< 0.4% by weight (at the time of packaging)

## Packaging and storage:

SUNPOR<sup>®</sup> A 423 is shipped in octabins (height 176 cm) on wooden pallets (114 x 114 cm), containing 1150 kg net of material.

The octabins are not weather- or water-proof and must therefore not be exposed to outdoor conditions.

In order to obtain the desired properties of SUNPOR<sup>®</sup> A 423, the raw material should be stored below 20 °C and be processed within one month.

## Processing:

## Preexpansion:

With discontinuously operating, state-of-the-art preexpanders SUNPOR<sup>®</sup> A 423 can be preexpanded to densities of approx. 20 kg/m<sup>3</sup>.

Lower densities can be achieved by double preexpansion or in optimized machines.



SUNPOR® A 423 has been treated with an antistatic agent to prevent a buildup of electrostatic charge during transport.

### **Intermediate aging:**

Intermediate aging should be between 8 and 24 hours.

### **Moulding:**

SUNPOR® A 423 can be processed in industry-standard moulding machines within a relatively wide range of steaming settings. When moulding complex parts no regenerative agent should be added, as otherwise the proper filling of thin-walled sections cannot be guaranteed.

### **Food packaging:**

SUNPOR® A 423 is made from styrene and additives which are, in accordance with Austrian and German provisions (if not already included in EU directives), suitable for the production of foodstuff packaging. It is the responsibility of the user to verify if a certain packaging material is suitable for the specific foodstuff to be packaged.

For further details on EPS food packaging please refer to the Technical Notice TM 301.

### **Shipping:**

ADR-marking: substance no. 2211:  
Polymeric beads, expandable  
Class: 9  
Packing group: III ADR

### **Safety instructions:**

Flammable pentane-air mixtures may be generated during storage and processing of SUNPOR® A 423. For this reason adequate ventilation must be ensured (UEG pentane 1.3% by volume).

In addition, all conceivable sources of ignition must be kept away, and the buildup of electric charges has to be prevented.

### **Please note:**

This Technical Notice reflects our current knowledge.

The suitability for concrete applications must be verified by the processor in a technical and legal context.

Subject to technical changes.