

sunpor[®] A321

Technical data sheet | Revision 11 | February 2026

Description:

sunpor[®] A321 is expandable polystyrene granulate (EPS) which can be processed into moulded foam parts.

Applications:

sunpor[®] A321 is used as a multi-application packaging material for contour mouldings with a minimum wall thickness of 10 mm.

Properly processed EPS foam packaging made from **sunpor[®] A321** provides high mechanical strength also with low densities, is not hygroscopic, and 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[®] A321** 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:	15 - 30 kg/m ³
Granulate geometry:	bead-shaped granulate
Typical granulate diameter:	0.7 - 1.1 mm (> 95 % by weight)
Pentane content (at the time of packaging):	≈ 6.2 % by weight
Water content (at the time of packaging):	< 0.4 % by weight

Packaging and storage:

sunpor[®] A321 is shipped in octabins (height max. 192 cm) on wooden pallets (114 x 114 cm) containing 1,150 kg net of material. The octabins are not weather- or water-proof and must therefore not be exposed to outdoor conditions.

It is not recommended to stack octabins more than one layer high. In case of double-stacking octabins under controlled conditions, the recommendations laid out in the document „**Instructions for stacking sunpor octabins**“ must be followed.

In order to obtain the desired properties of **sunpor[®] A321**, the raw material should be stored below 20 °C and be processed within one month.

Processing:

> Pre-expansion:

With discontinuously operating, state-of-the-art pre-expanders **sunpor[®] A321** can be pre-expanded to densities of approx. 18 kg/m³. Lower densities can be achieved by double pre-expansion or in optimized machines.

sunpor[®] A321 has been treated with an antistatic agent to prevent a build-up of electro-static charge during transport.

> Intermediate aging:

Intermediate aging should be between 10 and 48 hours.

> Moulding:

sunpor[®] A321 can be processed in industry-standard moulding machines with a relatively wide range of steaming settings.

If recycled material is added care has to be taken that the density of the recycled material equals the pre-expansion density as closely as possible to prevent segregation during production.

Food packaging:

sunpor[®] A321 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.

Shipping:

UN-Number:	2211
Designation:	Polymeric beads, expandable
Class:	9
Packing Group:	III ADR

Safety instructions:

Flammable pentane-air mixtures may be generated during storage and processing of **sunpor® A321**. For this reason, adequate ventilation must be ensured (LEL pentane 1.3 % by volume).

The blowing agent pentane escapes relatively slowly from EPS foam blocks. Thus, when cutting recently moulded blocks, the formation of a flammable pentane-air mixture has to be anticipated.

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