

suncolor[®] protect

Technical data sheet | Revision 09 | May 2021

Description:

suncolor[®] protect is bulk-dyed, expandable polystyrene granulate (EPS) with reduced pentane content, which can be processed into coloured, moulded parts with a wall thickness of more than 6 mm and a density above 40 kg/m³. It is manufactured by an extrusion process. Main application of **suncolor[®] protect** is the production of sport helmets.

Density range:	40 - 120 kg/m ³
Granulate geometry:	cylindrical
Typical granulate diameter:	diameter: 0.8 mm length: 1.5 mm
Pentane content (at the time of packaging):	> 4.5 % by weight
Water content (at the time of packaging):	< 0.3 % by weight

Colour:

- > **black** (grade 768)

Minor colour fluctuations between individual batches cannot be excluded. Colour appearance depends on foam density therefore colour variation may also result from differences in the density of the foam.

Packaging and storage:

suncolor[®] protect is shipped in octabins (height max. 192 cm) on wooden pallets (114 x 114 cm) containing 1,000 kg or in corrugated metal drums containing 125 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 **suncolor[®] protect**, 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, **suncolor[®] protect** can be pre-expanded to densities of 40 - 120 kg/m³

However, it is important that the pre-expanded beads are completely expelled from the pre-expander after each cycle because any beads remaining in the machine will become lighter in weight and in colour after repeated pre-expansion; this can lead to irregularities in the distribution of colour in the finished parts.

The special glossy finish absorbs somewhat more moisture during the pre-expansion than normal EPS materials. For this reason, the use of an efficient fluidised bed dryer is required.

> Intermediate aging:

The intermediate aging time should be minimum 24 hours. At higher densities, the intermediate aging time may be prolonged without difficulty.

> Moulding:

suncolor[®] protect can be processed in industry standard automatic moulding machines. Special steaming settings are not required.

Food packaging:

suncolor[®] protect is manufactured from polystyrene and additives which are suitable for production of food packaging in accordance with EU-directives. Checking the suitability of the packaging material for use with foodstuffs is the responsibility of the processor.

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 **suncolor[®] protect**. For this reason, adequate ventilation must be ensured (LEL pentane 1.3 % by volume).

The blowing agent pentane escapes relatively slowly from mouldings. Thus, when cutting recently moulded parts, 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.