® = registered Trademark of Knauf Industries Polymers GmbH

Technical Information

Neopolen® P 8220 K

Product Description

Neopolen P 8220 K is expanded Polypropylene supplied in the form of beads. The cells are largely closed.

Table 1:

Bulk density[1)] [kg/m³]	Average particle size [mm]	Average particle weight [mg]	Color[2)]
15 - 19	2.0 - 5.0	0.6 - 1.0	Black

[1)] Defined by KIP-Method PAA 1
[2] Color deviations are possible

Delivery, Conveying, Storage

Neopolen P 8220 K is delivered in the form of beads. These will be delivered as a bulk-load on truck. The delivery in Big Bags on truck is possible.

Unloading and conveying requires technical equipment designed for EPP beads.

Neopolen P 8220 K must be protected from the weather i.e. from rain, snow, direct sunlight and frost, as well as from excessive mechanical stress.

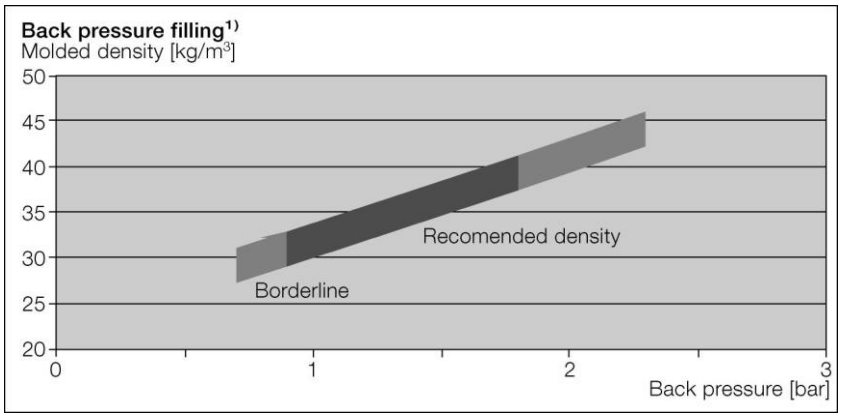
In order to comply with common regulations for the storage of combustible materials, welding sparks, electrical sparks, or other sources of ignition should be kept well away. Smoking should be forbidden.

Processing

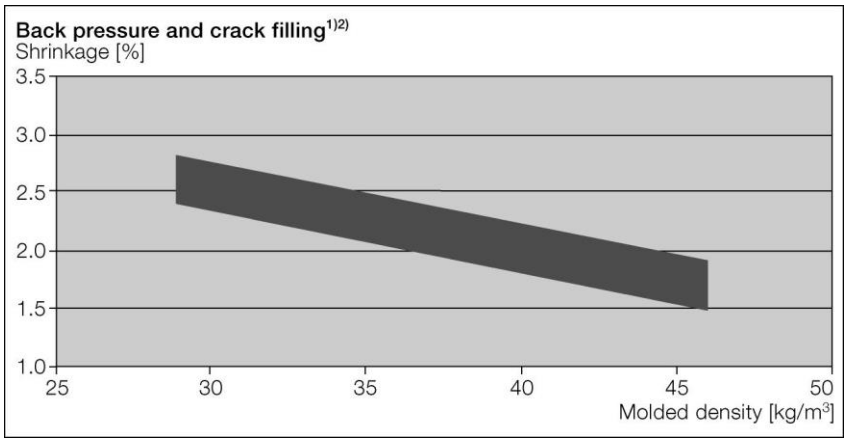
Neopolen P 8220 K is processed with molding machines typical for the EPP industry, that are designed for a steam pressure of at least 5 bar.

It is normally processed by the “Back pressure technology”. In principal, “Crack filling” is also possible. Using a compression rate of 2, depending on the fill pressure, a molded density of 35 kg/m³ is achievable.

After pre-pressurization (2.4 bar, 8 h, RT and processing at 1.5 bar), a minimum density of 22 kg/m³ can be achieved at a shrinkage of 2.8 %.



[1)] The Processing data are determined on molded parts (300 x 200 x 60 mm) produced under standard conditions and steam pressure of 3.2 - 3.6 bar. The data apply for average bulk densities.



[2)] Shrinkage after oven curing (80 °C)

Properties

In order to measure the physical properties, parts with dimensions 300 x 200 x 60 mm were molded on a machine typical for the EPP industry under standard conditions. The values as shown in the graphs and in table 2 can vary depending on part geometry and processing parameters.

Table 2: **Physical properties of moldings made from Neopolen P 8220 K (guideline values)**

Property	**Test method**	**Unit**	**Material density (MD) as ISO 845 [kg/m³] (Core density)**		
			20	30	40
Tensile strength	DIN EN ISO 1798	[kPa]	300	450	600
Elongation at break (100mm measuring length)	DIN EN ISO 1798	[%]	40	36	33
Compressive stress at 10 % strain at 25 % strain at 50 % strain	according to DIN EN ISO 844	[kPa]	 70 80 150	 120 150 240	 180 220 330
Compression set (50 %, 22 h, 23 °C) 24 h after stress release	DIN EN ISO 1856 (Method C)	[%]	30	29	28
Dimensional stability at heat (Linear size alteration after 4 d, 110 °C)	according to DIN ISO 2796	[%]	< 2	< 2	< 2
Thermal conductivity	DIN EN 12667	[$W \cdot m^{-1} \cdot K^{-1}$]	0.036	0.037	0.038
Water absorption (1 day)	according to DIN 53 428	[Vol.-%]	<1	<1	<1
Flammability sample thickness: 13 mm	FMVSS 302		←	fulfilled at MD 30 [kg/m³]	→

Further Technical Information

Detailed technical information concerning

- Delivery, conveying, storage
- Processing
- Physical and chemical properties
- Safety and environment

are available from:

https://www.knauf-industries.com/en/neopolen-epp-raw-material/

Product Safety and Environment

Neopolen P 8220 K is produced without the use of halogenated hydrocarbons or compounds containing heavy metals. It contains no materials that require declaration under the GADSL (Global Automotive Declarable Substance List, Version 3,0, www.gadsl.org).

At the time of delivery, the product contains no blowing agent and is not classified under the dangerous goods regulations.

Neopolen P 8220 K presents no danger to water.
(AwSV Germany 01.08.2017, App. 1)

Neopolen P 8220 K is recyclable.

When using this product, the information and advice given in our **Safety Data Sheet** should be observed. Necessary attention should also be given to the **precautions** necessary for handling chemicals.

Note

The data contained in this publication are based on our current knowledge and experience. In view of the many factors that may affect processing and application of our product, these data do not relieve processors from carrying out their own investigations and tests; neither do these data imply any guarantee of certain properties, nor the suitability of the product for a specific purpose. Any descriptions, drawings, photographs, data, proportions, weights etc. given herein may change without prior information and do not constitute the agreed contractual quality of the product. It is the responsibility of the recipient of our products to ensure that any proprietary rights and existing laws and legislation are observed.

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