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Technical Information

Neopolen® P 9435

Product Description

Neopolen® P 9435 is expanded Polypropylene in the form of beads. The cells are largely closed.

Table 1:

Bulk density ¹⁾ [kg/m ³]	Average particle size [mm]	Average particle weight [mg]	Color ²⁾
30 - 36	1,5 - 4,0	0,6 - 1,0	refer Table 1a

¹⁾ Defined by KIP-Method PAA 1

²⁾ Color deviations are possible

Table 1a:

Product		
Neopolen® P 9435 AB	(Azur Blue)	Blue
Neopolen® P 9435 LB	(Light Blue)	Light Blue
Neopolen® P 9435 DG	(Dark Green)	Green
Neopolen® P 9435 DY	(Deep Yellow)	Yellow
Neopolen® P 9435 SR	(Signal Red)	Red

Delivery, Conveying, Storage,

Neopolen® P 9435 is delivered in Big Bags by trucks.

Unloading and conveying requires technical equipment designed for EPP beads.

Neopolen® P 9435 must be protected from the weather i.e. from rain, snow, direct sunlight and frost, as well as from excessive mechanical stress.

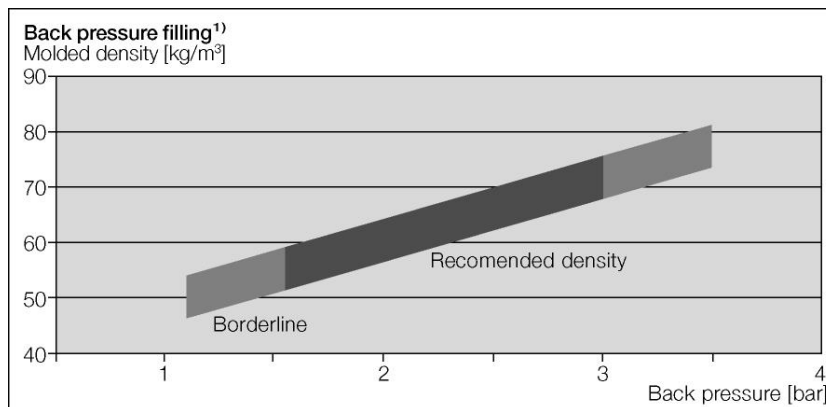
In order to comply with common regulations for the storage of combustible materials, welding sparks, electrical sparks, or other sources of ignition should be kept well away. Smoking should be forbidden.

Processing

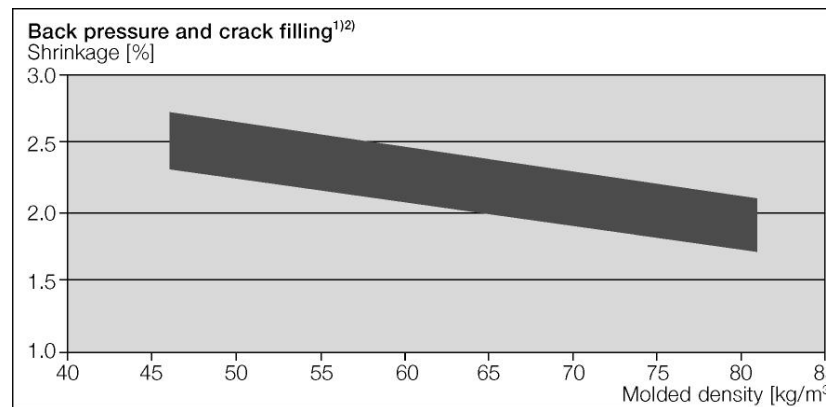
Neopolen® P 9435 is processed with molding machines typical for the EPP industry, that are designed for a steam pressure of at least 5 bar.

It is normally processed by the “Back pressure technology”. In principal “Crack filling” is also possible. Using a compression rate of 2, and depending on fill pressure, a molded density of 66 kg/m³ is achievable.

After pre-pressurization (2.5 bar, 8 h, RT and processing at 1.5 bar) a minimum density of 38 kg/m³ can be molded in which case shrinkage is an acceptable 2.3%.



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 9435 (guideline values)

Property	Test method	Unit	Material density (MD) at ISO 845 [kg/m ³] (Core density)				
			35	40	50	60	70
Tensile strength	DIN EN ISO 1798	[kPa]	530	600	740	880	1020
Elongation at break (100mm measuring length)	DIN EN ISO 1798	[%]	34	33	30	27	25
Compressive stress at 10% strain	according to ISO 844	[kPa]	150	180	240	310	390
at 25% strain			180	220	290	370	460
at 50% strain			280	330	440	550	670
Compression set (50%, 22 h, 23 °C) 24 h after stress release	DIN EN ISO 1856 (Procedure C)	[%]	29	28	27	26	25
Dimensional stability at heat (Linear size alteration after 4 d, 110 °C)	according to DIN ISO 2796	[%]	<2	<2	<2	<2	<2
Thermal conductivity	DIN 52612	[W·m ⁻¹ ·K ⁻¹]	0,037	0,038	0,039	0,040	0,041
Water absorption (1 day)	according to DIN 53428	[Vol.-%]	<1	<1	<1	<1	<1
Flammability sample thickness: 13 mm	FMVSS 302		← fulfilled at MD 30 [kg/m ³] →				

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 9435 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 9435 presents no danger to water.
(AwSV Germany 01.08.2017, App. 1)

The colorations of products for toy applications fulfil the requirements of the German BfR Recommendation XLVII (1.1.2003) and the BfR Recommendation IX (1.6.1994). Further, the colorations are listed in the Positive List in France (Circulaire 176) and are compliant with EU Resolution AP (89) I *“On the use of colorants in plastic materials coming into contact with food”*.

Neopolen® P 9435 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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