

PRODUCT DATA SHEET

28.01.2016 Ed.2



Polypropylene

Borcoat™ BB108E-1199

Polypropylene block copolymer for Steel Pipe Coating

Description

Borcoat BB108E-1199 is a polypropylene compound

The product is coloured white. It includes a combination of stabilisers to ensure long-term thermal stability.

The product is supplied as pellets for melt extrusion and as a powder for application by spray or other special means.

Applications

Borcoat BB108E-1199 is recommended as a top coat or as an anti-slip "rough coat" for multilayer PP systems used in

Steel Pipe Coating

Specifications

Borcoat BB108E-1199 is intended to fulfil following National and International standards, when appropriate industrial manufacturing standard procedures are applied and a continuous quality system is implemented and when used in combination with BB127E and a compatible powder epoxy.

DIN 30678
NF A49-711

EN ISO 21809-1

Special Features

Borcoat BB108E-1199 The maximum design temperature for normal ground installations is 110°C for onshore and can be used in specially designed systems like offshore coatings up to 140°C depending on surrounding conditions. When applied in the correct manner, the powder version provides a rough surface for the purpose of stopping concrete weight coating from slipping during the lay process.

Physical Properties

Property	Typical Value	Test Method
Data should not be used for specification work		
Density (Compound)	916 kg/m ³	ISO 1183-1, Method A
Melt Flow Rate (230 °C/2,16 kg)	0,9 g/10min	ISO 1133
Tensile Modulus (1 mm/min)	1.100 MPa	ISO 527-2
Tensile Strain at Yield (50 mm/min)	8 %	ISO 527-2
Tensile Strain at Break (50 mm/min)	> 400 %	ISO 527-2
Tensile Stress at Yield (50 mm/min)	26 MPa	ISO 527-2
Melting temperature	162 °C	ISO 11357-3
Oxidation Induction Time (220 °C), Pellet sample,	> 30 min	ISO 11357-6
Vicat softening temperature A50, (10 N)	145 °C	ISO 306
Environmental Stress Crack Resistance (50 °C, Igepal 10 % , F50)	> 5.000 h	ASTM D 1693-A

Borcoat is a trademark of the Borealis group.

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Charpy Impact Strength, notched (23 °C)
Charpy Impact Strength, notched (-20 °C)
Hardness, Shore D (1 s)
Moisture

25 kJ/m²
3 kJ/m²
65
< 500 ppm

ISO 179/1eA
ISO 179/1eA
ISO 868
ISO 15512

Application Related Tests

Property	Typical Value	Test Method
Data should not be used for specification work		
UV and thermal ageing (ΔMFR)	<= 35 %	ISO 21809-1, Annex G
Particle Size Distribution ¹	> 840 μm: 0 - 2% 600 - 840 μm: 0 - 5% 500 - 600 μm: 0 - 20% 300 - 500 μm: 35 - 85% 150 - 300 μm: 10 - 45% < 150 μm: < 12%	ASTM D 1921

¹ for material in powder form only

Processing Techniques

Pellets can be applied by flat die or crosshead extrusion. The actual conditions will depend on the type of equipment used.

Extrusion

Cylinder 200 - 220 °C
Head 210 - 220 °C
Die 210 - 220 °C
Melt temperature 220 - 240 °C

Specific recommendations for processing conditions can be determined only when the application and type of equipment are known. Please contact your local Borealis representative for such particulars. Please ask Borealis representatives for more specific information on the application of the powder version.

Storage

Borcoat BB108E-1199 shall be stored indoors below 50°C in unopened original packaging in clean and dry environment. It is recommended to ensure proper stock rotation by using first in – first out principle. Following aforementioned conditions the material can safely be stored for a period of up to 3 years after production. However, caution shall be taken regarding the moisture level. It is recommended to measure the moisture after longer storage periods prior to processing.

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**Polypropylene****Borcoat BB108E-1199****Safety**

The product is not classified as harmful to humans or the environment according to DPD 1999/45/EC or CLP regulation (EU) No. 1272/2008. According to Article 31 of Regulation (EC) 1907/2006 there is no legal requirement to provide a SDS for this product. Existing Product safety information sheet is valid.

Information on handling recommendations of Borcoat™ powder materials in which typical values for explosive classification data is provided is available upon request. Whenever the product is conveyed, accumulation of smaller dust fraction may occur in parts of the process. This can potentially occur in equipment such as filters, the upper part of silo cyclones, product mixers etc. Related to dust explosion risk, the design of powder handling equipment should comply with authority specifications and requirements. On informative basis Borealis can also provide our internal guideline "Design of dust explosion protection", which can be made available upon request. The data presented in the table below is based on the Dust Explosion Research report number 12/07/FN/05E_C and 12/10/FN/08E_C provided by an independent 3rd party testing company, thus Borealis makes no warranties on this particular statement or any report/document possibly based on it. The determination of maximum explosion pressure is performed acc to EN 14034-1 and maximum rate of pressure rise EN 14034-2. Testing was performed on sieved less than 500 µm fractions.

Parameter	Value
Kst-value	11 bar m/s
Dust explosion class	St 1
Maximum exposure pressure	3,9 barg
Maximum rate of pressure rise (20l)	40 bar/s

Recycling

The product is suitable for recycling using modern methods of shredding and cleaning. In-house production waste should be kept clean to facilitate direct recycling.

Related Documents

The following related documents are available on request, and represent various aspects on the usability, safety, recovery and disposal of the products.

Recovery and disposal of polyolefins
Information on emissions from processing and fires
"Safety data sheet" / "Product safety information sheet"

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**Polypropylene****Borcoat BB108E-1199****Disclaimer**

The product(s) mentioned herein are not intended to be used for medical, pharmaceutical or healthcare applications and we do not support their use for such applications.

To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication; however we do not assume any liability whatsoever for the accuracy and completeness of such information.

Borealis makes no warranties which extend beyond the description contained herein. Nothing herein shall constitute any warranty of merchantability or fitness for a particular purpose.

It is the customer's responsibility to inspect and test our products in order to satisfy itself as to the suitability of the products for the customer's particular purpose. The customer is responsible for the appropriate, safe and legal use, processing and handling of our products.

No liability can be accepted in respect of the use of any Borealis product in conjunction with any other products and/or materials. The information contained herein relates exclusively to our products when not used in conjunction with any other material unless as specifically provided for in the test methods stated above.

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