PRODUCT DATA SHEET

Polypropylene

Borcoat™ BB108E-1199

Polypropylene compound for Steel Pipe Coating

Description

Borcoat BB108E-1199 is a polypropylene (PP) compound. The product is white coloured and available in pellet form for processing via extrusion.

Borcoat BB108E-1199 includes a combination of pigments and stabilizers to ensure long-term stability against thermal and UV ageing.

Applications

Steel pipe coating

Borcoat BB108E-1199 is intended to be used as top-coat in three-layer-PP based anti-corrosion or as a solid or top-coat layer in multi-layer-PP based thermal insulation coatings at design temperatures up to 110°C for onshore and 140°C for offshore applications.

Borcoat BB108E-1199 is intended to fulfill below mentioned national and international standards and specifications, when appropriate industrial manufacturing standard procedures are applied, a continuous quality system is implemented and when used in combination with a compatible Fusion Bonded Epoxy (FBE) powder and adhesive materials such as Borcoat BB127E, Borcoat BB127E-PW or Borcoat BB122E-LT.

Specifications

Borcoat BB108E-1199 and/or articles produced from it, are expected to meet the applicable requirements included in the below mentioned standards provided it is processed using sound material handling and processing practices as well as appropriate testing procedures.

DIN 30678	EN ISO 21809-1
DNVGL-RP-F106	NF A49-711

Physical properties

Property	Typical value *	Unit	Test method
Density	916	kg/m³	ISO 1183-1/Method A
Melt flow rate (230 °C/2.16 kg)	0.9	g/10min	ISO 1133-1
Base resin density	900	kg/m3	ISO 1183-1/Method A
Moisture content [1]	≤500	ppm	ISO 15512
Melting temperature [2]	162	°C	ISO 11357-3
Oxidation induction time (220 °C)	≥40	min	ISO 11357-6
Tensile modulus (1 mm/min) (23°C)	1100	MPa	ISO 527-2
Tensile stress at yield (50 mm/min) (23°C)	26	MPa	ISO 527-2
Tensile strain at yield (50 mm/min) (23°C)	8	%	ISO 527-2
Tensile strain at break (50mm/min) (23°C)	≥400	%	ISO 527-2
Charpy impact strength, notched (23 °C)	25	kJ/m²	ISO 179-1
Charpy impact strength, notched (-20 °C)	≥3	kJ/m²	ISO 179-1
Vicat softening temperature A50 (10 N)	145	°C	ISO 306
Hardness, Shore D [3]	65	-	ISO 868
Environmental stress crack resistance (50°C, Igepal 10%, F0)	≥5000	h	ASTM D1693

* Data should not be used for specification work

[1] *Karl Fischer-Titration*
[2] *DSC*
[3] *Measured at 1s*

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Other properties

Property	Typical value *	Unit	Test method
UV and thermal ageing (ΔMFR) [4]	≤ 35	%	ISO 21809-1

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[4] *Annex G*

Processing techniques

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

Processing setting	Typical value/range
Cylinder temperature	200 - 220 °C
Head temperature	210 - 220 °C
Die temperature	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.

Packaging and storage

Borcoat BB108E-1199 is supplied in 25 kg bags on 1375 kg pallets or in bulk.

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 be stored for a period of up to 36 months 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.

The shelf-life of the product can be extended after Borealis has re-tested selected material properties and verified that the test results are still within the product specification.

Product compliance documents

Latest versions of product safety information sheets (PSIS), product safety data sheets (SDS) and other product liability documents are available in our website www.borealisgroup.com.

Sustainability aspects

Borealis is ever mindful of the impact of our products on the planet. We promote Design for Circularity (DfC) and Design for Recycling (DfR) to conserve natural resources and to reduce the environmental impact of products over their entire lifetime (including production, use phase and after phase). DfR helps ensure that material can be effectively recycled while maximizing the material performance efficiency. Further information on sustainability and Design for Recycling (DfR) can be found from our websites www.borealisgroup.com and www.borealiseverminds.com.

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