PRODUCT DATA SHEET

Polyethylene

Borcoat™ HE7405

Polyethylene Compound for Steel Pipe Coating

Description

Borcoat HE7405 is a polyethylene (PE) compound. The product is black coloured and available in powder form for spray application.

Applications

Steel pipe coating

Borcoat HE7405 is recommended to be used as an anti-slip "rough coat" layer on top of three-layer-PE based anti-corrosion coatings for steel pipes. Rough coat may be applied for/when:

- PE coated steel pipes are installed in steep terrain to increase friction with the surrounding ground

- Increased safety during handling and loading operations

- PE coated steel pipes on which a concrete weight coating is applied

- Offshore pipes without concrete weight coating to improve the grip in the caterpillar clamps during laying operations

Specifications

Borcoat HE7405 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.

DNVGL-RP-F106

EN ISO 21809-1

Physical properties

Property	Typical value *	Unit	Test method
Density	944	kg/m³	ISO 1183-1/Method A
Melt flow rate (190 °C/2.16 kg)	8.0	g/10 min	ISO1133-1
Moisture content [1]	≤400	ppm	ISO 15512
Melting temperature [2]	130	°C	ISO 11357-3
Oxidation induction time (210 °C)	≥20	min	ISO 11357-6
Vicat softening temperature A50 (10 N)	≥105	°C	ISO 306

* Data should not be used for specification work

[1] *Karl Fischer-titration*
[2] *DSC*

Other properties

Property	Typical value *	Unit	Test method
Particle size distribution (500 - 600µm)	0 - 10	wt.%	ASTM D1921
Particle size distribution (425 - 500µm)	0 - 40	wt.%	ASTM D1921
Particle size distribution (300 - 425µm)	20 - 45	wt.%	ASTM D1921
Particle size distribution (212 - 300µm)	10 - 40	wt.%	ASTM D1921
Particle size distribution (150 - 212µm)	5 - 10	wt.%	ASTM D1921
Particle size distribution (<150µm)	0 - 20	wt.%	ASTM D1921

* Data should not be used for specification work

Polyethylene

Borcoat™ HE7405

Processing techniques

Borcoat HE7405 is a powdered material and is applied directly on top of still molten PE top coat in the coating process before quenching in the cooling unit. There are a number of methods used to apply the powder such as electrostatic spray, using a shaker plate mechanism or a belt dosing unit with a funnel-shaped outlet. Other methods may also be suitable. The application rate and consistency is dependent on the type of application equipment, coating unit design, dimensions of the steel pipe, temperature of the coated pipe and the line speed. For side extrusion (wrapping), an additional light-weight roller reduces the amount of loose particles. Some experimental design must be done to have a suitable set up. Please contact your Borealis representative for more details.

Packaging and storage

Borcoat HE7405 is supplied in 20 kg bags on 1100 kg pallets.

Borcoat HE7405 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 afore-mentioned 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.

Borealis AG | Trabrennstrasse 6-8 | A-1020 Vienna | Austria
Telephone: +43 1 22 400 0* | Fax: +43 1 22 400 333
Website www.borealisgroup.com