Polyethylene

Borcoat™ ME0420

Grafted Polyethylene adhesive for Steel Pipe Coating

Description

Borcoat ME0420 is a maleic anhydride grafted polyethylene adhesive.

The product is non-pigmented and supplied in pellet form.

Applications

Borcoat ME0420 is recommended as an adhesive for a three layer PE system used in:

Steel Pipe Coating

Specifications

Borcoat ME0420 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 Borcoat HE3450, HE3450-H or HE3453 and a compatible Fusion Bonded Epoxy(FBE) powder.

EN ISO 21809-1
DIN 30670
NF A49-710
CAN/CSA-Z245.21

Special Features

Borcoat ME0420 is intended to be used as an adhesive for PE three layer systems at design temperatures between -40°C up to +90°C.

Physical Properties

Property	Typical Value Data should not be used for specification work	Test Method
Density	934 kg/m³	ISO 1183-1, Method A
Melt Flow Rate (190 °C/2,16 kg)	1,2 g/10min	ISO 1133-1, Method B
Tensile Strain at Break (50 mm/min) (23 °C)	>= 600 %	ISO 527
Tensile Stress at Yield (50 mm/min) (23 °C)	12 MPa	ISO 527
Tensile Stress at Break (50 mm/min) (23 °C)	18 MPa	ISO 527
Melting temperature (DSC)	122 °C	ISO 11357-3
Oxidation Induction Time (200 °C),	>= 30 min	ISO 11357-6
Vicat softening temperature A50, (10 N)	100 °C	ISO 306
Brittleness temperature	< -80 °C	ASTM D 746
Hardness, Shore D (1 s)	50	ISO 868
Moisture [1]	<= 0,03 %	ISO 15512
Peel strength (3 layer) (23 °C)	> 200 N/cm	ISO 21809-1
Peel strength (3 layer) (80 °C)	> 50 N/cm	ISO 21809-1
Peel strength (3 layer) (90 °C)	> 50 N/cm	ISO 21809-1

[1] Karl Fischer-titration

Borealis AG | Wagramer Strasse 17-19 | 1220 Vienna | Austria
Telephone +43 1 224 00 0 | Fax +43 1 22 400 333
FN 269858a | CCC Commercial Court of Vienna | Website www.borealisgroup.com

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Other properties

Property	Typical Value Data should not be used for specification work	Test Method
Reactive Site Content	>= 0,15 %	Borealis Method

Processing Techniques

The actual conditions will depend on the type of equipment used.

Extrusion

Borcoat ME0420 can be applied by flat die or crosshead extrusion. The actual extrusion conditions will depend on the type of equipment used.

Cylinder	200 - 230 °C	
Head	210 - 230 °C	
Die	210 - 230 °C	
Melt temperature	200 - 230 °C	
Steel pipe temperature	180 - 210 °C	in line with FBE supplier recommendations

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

Package: Pellets 25 kg Bags on 1375 kg pallet

Storage

Borcoat ME0420 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 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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Safety
The product is not classified as harmful to humans or the environment according to 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.

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.

Please see our "Safety data sheet" / "Product safety information sheet" for details on various aspects of safety, recovery and disposal of the product. For more information, contact your Borealis representative.

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 migration
"Safety data sheet" / "Product safety information sheet"

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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