Polypropylene

RA130E-8427

Polypropylene Random Copolymer for Pressure Pipe Systems

Description

RA130E-8427 is a grey, high molecular weight, low melt flow rate polypropylene random copolymer compound with good flexibility.

RA130E-8427 complies with the material requirements of DIN 8077, DIN 8078, prEN 12202 and ISO/DIS 15874.

Applications

RA130E-8427 is recommended for inhouse hot and cold water pipes and fittings, floor and wall heating systems and radiator connections.

Physical Properties**

		Typical Value*	Unit	Test Method
Density		905	kg/m^3	ISO 1183
Melt Flow Rate	(230°C/2.16 kg)	0.25	g/10 min	ISO 1133
Flexural Modulus	(2 mm/min)	800	MPa	ISO 178
Tensile Stress at Yield	(50 mm/min)	25	MPa	ISO 527-2
Tensile Strain at Yield	(50 mm/min)	13.5	%	ISO 527-2
Modulus of Elasticity in Tension	(1 mm/min)	900	MPa	ISO 527
Charpy Impact Strength, notched	(+23°C)	20	kJ/m^2	ISO 179/1eA
Charpy Impact Strength, notched	(0°C)	3.5	kJ/m^2	ISO 179/1eA
Charpy Impact Strength, notched	(-20°C)	2	kJ/m^2	ISO 179/1eA
Charpy Impact Strength, unnotched	(+23°C)	No break	kJ/m^2	ISO 179/1eU
Charpy Impact Strength, unnotched	(0°C)	No break	kJ/m^2	ISO 179/1eU
Charpy Impact Strength, unnotched	(-20°C)	40	kJ/m^2	ISO 179/1eU

* Data should not be used for specification work.
** Measured on standard injection moulded specimens.

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Pipe Properties***

	Typical Value*	Unit	Test Method
Resistance to Internal Hydrostatic Pressure			
16.0 MPa; 20°C; ≥1 hour	>10	hours	ISO 1167
3.5 MPa; 95°C; ≥1000 hours	>1200	hours	ISO 1167
1.9 MPa; 110°C; ≥8760 hours	>8760	hours	ISO 1167
Mean Linear Thermal Coefficient of Expansion from 0°C to 70°C	1.5	$*10^{-4}K^{-1}$	DIN 53752
Thermal Conductivity	0.24	$W\ K^{-1}\ m^{-1}$	DIN 52612 Part 1
Surface Resistance	$>10^{12}$	Ohm	DIN 53482/VDE 0303 Part 2

* Data should not be used for specification work.

*** All these data are influenced by the pipe processing and the quality level of the pipe are according to the relevant standards.

Processing guidelines

The actual extrusion conditions will depend on the type of equipment used and the size of the pipe required. The following conditions should be used as a guide when starting up the extruder.

Cylinder	180 - 210°C
Head	210 - 220°C
Die	210 - 220°C
Melt temperature	220 - 220°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.

Storage and handling

RA130E-8427 should be stored in dry conditions at temperatures below 50°C and protected from UV-light.

Improper storage can initiate degradation, which results in odour generation and colour changes and can have negative effects on the physical properties of the product.

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Safety

RA130E-8427 is not classified as dangerous preparation.

Dust and fines from the product carry a risk of dust explosion. All equipment should be properly earthed.

Inhalation of dust should be avoided as it may cause irritation of the respiratory system. Small amounts of fumes are generated during processing of the product. Proper ventilation is therefore required.

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.

A Safety Data Sheet is available on request. Please contact your Borealis representative for more details on various aspects of safety, recovery and disposal of the product.

Related documents

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

Recovery and disposal of Polyolefins
Information on Emissions from Processing and Fires
Safety Data Sheet, SDS
Environmental Fact Sheet

Liability Statements on:

- Compliance to Regulations for Drinking Water Pipes
- Compliance to Food Contact Regulations

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