

PRODUCT DATA SHEET

POLYETHYLENE

Borstar® HE3477-RT

PE-RT FOR HOT AND COLD WATER / INDUSTRIAL APPLICATIONS

DESCRIPTION

Borstar® HE3477-RT is a natural high density ethylene/hexene copolymer (HDPE) produced with advanced Borstar® Technology. It has a unique molecular structure that provides excellent stress crack resistance combined with long-term hydrostatic strength and high heat stability.

APPLICATIONS

Borstar® HE3477-RT is designed for Hot & Cold water and Industrial applications due to its excellent properties over a wide range of temperatures, good chemical and abrasion resistance. Typical applications are hot & cold water distribution, district heating & cooling systems, radiator connections, underfloor heating systems, thermoplastic liners, single and multi-layer pipes and other industrial applications.

SPECIFICATIONS

Borstar® HE3477-RT conforms to PE-RT Type II requirements of ISO 22391 and GB/T 28799 (Plastics piping systems for hot and cold water installations – Polyethylene of raised temperature resistance) with a Minimum Required Strength (MRS) classification of 10 MPa.

PHYSICAL PROPERTIES

Property	Typical Value	Test Method
Density	950kg/m ³	ISO 1183
Melt Flow Rate (190°C/5.0kg)	0.30g/10min	ISO 1133
Flexural Modulus (2mm/min)	1100MPa	ISO 178
Tensile Modulus (1mm/min)	1000MPa	ISO 527
Tensile Strain at Break (50mm/min)	600%	ISO 527-2
Tensile Stress at Yield (50mm/min)	>24MPa	ISO 527-2
Tensile Stress at Break (50mm/min)	33MPa	ISO 527-2
Oxidation Induction Time (210°C)	≥40min	ISO 11357-6

*Data should not be used for specification work

PROCESSING CONDITIONS

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

Following parameters should be used as guidelines for extrusion:

Cylinder	170-190°C
Die	180-200°C

Specific recommendations for processing conditions can be determined only when the application and type of equipment are known. Please contact your local Borouge representative for such particulars.

STORAGE

Borstar® HE3477-RT should be stored in dry conditions at temperatures below 50°C and protected from UV-light. Improper storage can initiate degradation, which results in odor generation and can have negative effects on the physical properties of the product.

Expected shelf life at proper storage conditions is 2 years from the date of production.

More information on storage can be found in Safety Information Sheet (SIS) for this product.

SAFETY

The product is not classified as a hazardous 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.

Please see our Safety Information Sheet (SIS) for details on various aspects of safety, recovery and disposal of the product, for more information contact your Borouge representative.

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 product.

Safety Information Sheet

Statement on chemicals, regulations and standards

Statement on compliance to regulations for drinking water pipes

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.

Borouge 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 Borouge products in conjunction with other materials. The information contained herein relates exclusively to our products when not used in conjunction with any third party materials.

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