DOWLEX™ 2366 Polyethylene Resin of Raised Temperature Resistance (PE-RT)

for better productivity and high flexibility

Dow is highly committed to serving the global pipe industry and constantly working to develop new materials that can help to enhance piping systems. The DOWLEX™ 2366 PE-RT Resin represents a further expansion of the family of Polyethylene Resins of Raised Temperature Resistance (PE-RT). DOWLEX™ 2366 PE-RT Resin is an ethylene-octene 1 copolymer produced with Dow's proprietary solution process. It has a distinct molecular structure with a controlled side chain distribution, which offers excellent stress crack resistance properties combined with excellent long term hydrostatic strength. This material was developed to help enhance production line speed, while maintaining typical Dow PE-RT characteristics such as high flexibility or the glossy surface finish.

Key applications

Pipes for hot and cold-water systems, such as:

- Underfloor heating pipes
- Heating and cooling applications
- Mono- and multi-layer pipe applications

DOWLEX™ 2366 PE-RT Resin addresses the ISO 22391-2:2021 requirements for PE-RT Type I. With an ∂_{LPL} of 8.71 MPa at 20°C and 50 years DOWLEX™ 2366 PE-RT Resin is classified with a minimum required strength MRS value of 8 MPa and is designated PE80 according to ISO 12162. Application class 4 for underfloor heating pipes is exceeded by DOWLEX™ 2366 PE-RT Resin with a ∂_{LPL} of 3.49 MPa. Please contact your Dow Account Manager to obtain further information.

DOWLEX™ 2366 PE-RT Resin technical properties[1]

Physical	Nominal value	Unit	Test method
Density	0.933	g/cm³	ISO[2] 1183-1
Melt index			
190°C/2.16 kg	0.70	g/10 min	ISO 1133
190°C/5.0 kg	2.25	g/10 min	ISO 1133
Mechanical	**Nominal value**	**Unit (SI)**	**Test method**
Tensile modulus			ISO 527-2
2.00 mm, Compression molded	560	MPa	
Tensile stress			ISO 527-2
Yield, 2.00 mm, Compression molded	17.0	MPa	
Break, 2.00 mm, Compression molded	43.0	MPa	
Tensile strain			ISO 527-2
Yield, 2.00 mm, Compression molded	13	%	
Break, 2.00 mm, Compression molded	>800	%	
Flexural modulus	600	MPa	ISO 178
Thermal	**Nominal value**	**Unit (SI)**	**Test method**
Vicat softening temperature	119	°C	ASTM[3] D1525
CLTE — Flow (20 to 70°C)	2.74 E-4	cm/cm/°C	DIN[4] 53752
Thermal conductivity (60°C)	0.40	W/m/K	DIN 52612

1 Typical properties: these are not to be construed as specifications. Users should confirm results by their own tests.
2 ISO: International Standardization Organization
3 ASTM: American Society for Testing and Materials
4 DIN: Deutsche Industrie Norm

Processing recommendations

DOWLEX™ 2366 PE-RT Resin is easy to process on traditional PE processing equipment. Typical extrusion temperatures for processing range from 190°C to 230°C. For further information, see our Extrusion Guideline.

Dow: A track record of commitment to plastic pipes

Dow has over 40 years of experience in the pipe industry and works with the world's leading pipe producers and extruder manufacturers to develop exceptional pipe products. The company operates pipe technology R&D centers around the world and is constantly working to improve existing resins and develop new materials that help piping systems of all kinds operate at maximum performance.

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