2002F

HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE

FOR SPECIALTY BLOW MOLDING

Relene 2002F is a high molecular weight, high-density polyethylene (HDPE) grade, typically designed for blow molded automotive fuel tank & gas cylinder applications. This grade can also be used for medium blow molding application. The grade demonstrates very high Environmental Stress Cracking Resistance (ESCR), good chemical resistance in combination with an excellent low temperature properties. Its high melt strength helps in production of multi-layer tanks by blow molding. This grade exhibits outstanding resistance particularly to ethanol blended gasoline.

BIS Designation Code: IS 7328-3B-BB-ETA

Typical Characteristics

Property	Test Method	Unit	Typical Value*
Melt Flow Rate (190^{o}C/ 21.6 kg)	ASTM D1238	g/10 min	5.5
Density	ASTM D792	g/cm^{3}	0.947
Tensile Strength at Yield	ASTM D638	MPa	24
Tensile Stress at Break	ASTM D638	MPa	39
Tensile Modulus	ASTM D638	MPa	1200
Elongation at Yield	ASTM D638	%	9
Elongation at Break	ASTM D638	%	800
Flexural Modulus	ASTM D790	MPa	880
ESCR @ 10% Igepal Soln (F_{50})	ASTM D1693B	Hrs	>1000
ESCR @ 100 % Igepal Soln (F_{50})	ASTM D1693B	Hrs	>1000

*Typical values, not to be taken as specification. All the mechanical properties are done on compression molded specimen in accordance with ASTM D4976

Typical Processing Conditions

Processing temperatures: 180 - 220 ^{O}C

Note: Processing parameters mentioned above are for reference only and not to be considered as specifications. They may vary based on the product to be manufactured.

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Applications

This grade is specially designed for blow molded Automotive fuel tanks, Gas cylinders, Medium blow molding containers etc.

Regulatory Information

The product complies with Indian Standard IS 10146 on “Specification for Polyethylene for safe use in contact with foodstuffs, pharmaceuticals, and drinking water.” It also conforms to IS 16738:2018 on “Positive list of constituents for polypropylene, polyethylene and their copolymers for its safe use in contact with foodstuffs and pharmaceuticals.”

The grade and the additives incorporated in it also comply with the FDA:CFR Title 21,177.1520, Olefin polymers.

Not to be used in the manufacture of Single Use Plastic (SUP) items prohibited under PWM Rules, 2016.

Storage Recommendations

Bags should be stored in dry / closed conditions at temperatures below 50°C and protected from UV / direct sunlight.

DISCLAIMER

The information contained herein may include typical properties and processing parameters of the grade or its typical performances when used in respective applications. The values given above are based on analysis of representative samples and not the actual product supplied. It is the customer’s responsibility to inspect and test our grades in order to satisfy itself as to the suitability of the products for customers’ particular application. The customer is solely responsible for all determinations regarding any use of material or product and any process in its area of interest. RIL assumes no obligation or liability for any loss, damage or injury directly or indirectly suffered or incurred as a result of using any of the information or product given in this document. The information and data presented herein is true and accurate to the best of our knowledge. No warranty or guarantee expressed or implied, is made regarding performance or otherwise. This information and data may not be considered as a suggestion to use our products without taking into account existing patents, or legal provisions or regulations, whether national or international. The user of any information and/or data is advised to obtain the latest details from any of the offices of the company or its authorized agents, as the information and/or data is subject to change based on the research and development work undertaken by the company.