

iMPACT 100[®]

Technical Data Sheet

Black High Density Polyethylene

iMPACT 100[®] is a black High Density Polyethylene resin designed for all dimensions of PE100 pressure pipe where transportation of potable water, gas, effluent, slurry and certain chemical substances is required. It is a bimodal high molecular weight resin with excellent processing characteristics, impact strength and good resistance to environmental stress cracking, abrasion, chemical attack and UV radiation.

iMPACT 100[®] complies with:

- SANS 4427-1:2008/ISO 4427-1:2019 Plastics piping systems for water supply
- SANS 4437-1:2014/ISO 4437-1:2014 Plastics piping systems for the supply of gaseous fuels

Typical Applications

Pipes for:

- Potable water mains
- Gas distribution mains
- Effluent
- Slurries
- Chemical Waste

PROPERTIES ⁽¹⁾	VALUE	UNIT	TEST METHOD
Physical			
Melt Flow Rate, 190 °C/ 5 kg	0.30	g/10min	ISO 1133
Melt Flow Rate, 190 °C/ 21.6 kg	9.0	g/10min	ISO 1133
Density ⁽²⁾	0.957	g/cm ³	ISO 1183
Carbon black content	2.0 - 2.5	%	ISO 6964
Carbon black dispersion	≤3		ISO 18553
Mechanical⁽³⁾			
Tensile Yield ⁽⁴⁾	26	MPa	
Ultimate Tensile ⁽⁴⁾	33	%	ASTM D638
Ultimate Elongation ⁽⁴⁾	>750	MPa	ASTM D638
Thermal			
Oxidation Induction Time (210°C)	>30	min	ISO 11357

(1) Typical values; not to be construed as specification limits.

(2) Unannealed.

(3) Compression moulded samples.

(4) Test speed 50mm/min

Typical processing conditions	Extrusion
Feed Zone (°C)	160 - 170
Zone 1 (°C)	180 - 200
Zone 2 (°C)	190 - 220
Zone 3 (°C)	190 - 220
Melt Temp (°C)	190 - 220

For further information on this product's compliance to applicable South African National Standards, please contact Safripol R&D.

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Product Stewardship	<p>At Safripol, protecting people and the environment will be a part of everything we do and every decision we make. Each employee has a primary responsibility in ensuring that our products and operations meet applicable government standards.</p> <p>Our goal is to eliminate all injuries, prevent adverse environment and health impacts, reduce wastes and emissions and promote resource conservation at every stage of the life cycle of our products. The success of this rests with each and every individual involved with Safripol products throughout the life cycle.</p>
Food Contact Compliance	iMPACT 100 [®] High Density Polyethylene Resin in the form of black granules should comply with Commission Regulation (EU) No 10/2011 food contact regulations when used unmodified and processed according to good manufacturing practices for food contact applications. The purchaser remains responsible for determining whether the use complies with all relevant regulations.
Customer Notice	Safripol strongly encourages its customers to review both their manufacturing processes and their applications of Safripol products from the standpoint of human health and environmental quality to ensure that Safripol products are not used in ways for which they are not intended or tested. Safripol personnel are available to answer your questions and to provide reasonable technical support. Safripol product literature, including safety data sheets, should be consulted prior to use of Safripol products. Current safety data sheets are available from Safripol.
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Additional Information

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