HD 0454 TR

HIGH DENSITY POLYETHYLENE

DOCUMENT NUMBER: SP-023-MA-001-10

SOCAR POLYMER

Extended Product Information

(for Technical Support of Customers, by Sales request only)

HDPE grade name: HD 0454 TR
Batch Number: 22PE019
Production Date: 14/01/2022
EPI issue date: 27/01/2022

Sample of the above-mentioned High-Density Polyethylene (HDPE) product batch were analyzed in the Quality Control laboratory of SOCAR Polymer LLC in Sumgait and the following average data were obtained.

Properties		Value	Unit	Test Method
Physical				
Melt Flow Rate (MFR at 190°C/2.16 kg)		**0.31**	g/10 min	ISO 1133
Melt Flow Rate (MFR at 190°C/5.0 kg)		**1.26**	g/10 min	ISO 1133
Melt Flow Rate (MFR at 190°C/21.6 kg)		**25.5**	g/10 min	ISO 1133
Viscosity μ2		**1788.1**	Pa*s	SP-027-PR-033*
Density		**956.8**	kg/m^3	ISO 1183-1
Mechanical				
Tensile strength at yield (20 mm/min)		**26.7**	MPa	ISO 527-2
Tensile strength at break (20 mm/min)		**32.1**	MPa	ISO 527-2
Elongation at break (20 mm/min)		**839.3**	%	ISO 527-2
Flexural Modulus (2 mm/min)		**1323.2**	MPa	ISO 178
Impact				
Izod Impact Strength at 23°C (Notched)		**10.5**	kJ/m^2	ISO 180
Charpy Impact Strength at 23°C (Notched)		**10.5**	kJ/m^2	ISO 179
Thermal				
HDT (0.45 MPa)		**77.7**	^oC	ISO 75 B-1, -2
Vicat (10N)		**128.3**	^oC	ISO 306
Additional properties				
Bulk density		**553.4**	kg/m^3	ISO R60
Yellowness index		**-0.51**	—	ASTM D1925
Whiteness Index		**68.1**	—	ASTM E313-73
Number of pellets per gram		**44**	N/g	SP-027-PR-002*
Pellet Size Distribution	>4mm	**0.35**	wt%	SP-027-PR-002*
	4-2.5 mm	**99.65**		
	2.5-1.0 mm	**0.0**		
	<1.0mm	**0.0**		
Additive				
Irganox 1010		**553.4**	ppm	SP-027-PR-054*
P		**26.5**	ppm	SP-027-PR-017*
Ca		**56.2**	ppm	SP-027-PR-017*
Catalyst residue				
Al		**21.0**	ppm	SP-027-PR-017*
Ti		**5.7**	ppm	SP-027-PR-017*

* - SOCAR Polymer method

Notes:

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Laboratory person in charge: **Approved by:**

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