Celanese
The chemistry inside innovation™

Zytel® LC7602 BK010A

LONG CHAIN POLYAMIDE RESIN

Zytel® LCPA long chain polyamide resins provide an innovative and growing portfolio of flexible polymers with excellent thermal, chemical, and hydrolysis resistance. The diverse selection of Zytel® LCPA grades is targeted for a range of performance characteristics, balancing temperature resistance, flexibility and low permeation.

Zytel® LC7602 BK010A is a flexible, toughened and plasticized black polyamide resin intended for extrusion applications.

Product information

Resin Identification	PA-IP	ISO 1043
Part Marking Code	>PA-IP<	ISO 11469
ISO designation	ISO 16396-PA*-HIP,,M1CG1H,S14-007	

Typical mechanical properties

	dry/cond.		
Tensile Modulus	670 / -	MPa	ISO 527-1/-2
Stress at 50% strain	28 / -	MPa	ISO 527-1/-2
Strain at break, 5mm/min	>50[1] / -	%	ISO 527-1/-2
Flexural Modulus	650 / -	MPa	ISO 178
Charpy impact strength, 23 °C	N / N	kJ/m²	ISO 179/1eU
Charpy impact strength, -30 °C	N / -	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23 °C	100 / -	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -40 °C	12 / -	kJ/m²	ISO 179/1eA
Izod notched impact strength, 23 °C	82 / -	kJ/m²	ISO 180/1A
Izod notched impact strength, -40 °C	15 / -	kJ/m²	ISO 180/1A
Poisson's ratio	0.46 / -		

[1]: greater than 150

Thermal properties

	dry/cond.		
Melting temperature, 10 °C/min	206 / *	°C	ISO 11357-1/-3
Glass transition temperature, 10 °C/min	50 / 40	°C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	40 / *	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	48 / *	°C	ISO 75-1/-2

Flammability

FMVSS Class	B		ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	<80	mm/min	ISO 3795 (FMVSS 302)

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Other properties

	dry/cond.		
Density	1030 / -	kg/m³	ISO 1183

Extrusion

Drying Temperature	75 - 80	°C
Drying Time, Dehumidified Dryer	3 - 4	h
Processing Moisture Content	≤0.06	%
Melt Temperature Optimum	225	°C
Melt Temperature Range	220 - 230	°C

Characteristics

Additives	Plasticiser

Chemical Media Resistance

Salt solutions

- ✔ Zinc Chloride solution (50% by mass), 23°C

Other

- ✔ Ethylene Glycol (50% by mass) in water, 108°C
- ✔ Coolant Glysantin G48, 1:1 in water, 125°C

Symbols used:

✔ possibly resistant
Defined as: Supplier has sufficient indication that contact with chemical can be potentially accepted under the intended use conditions and expected service life. Criteria for assessment have to be indicated (e.g. surface aspect, volume change, property change).

✘ not recommended - see explanation
Defined as: Not recommended for general use. However, short-term exposure under certain restricted conditions could be acceptable (e.g. fast cleaning with thorough rinsing, spills, wiping, vapor exposure).