

Product Data Sheet

IROGRAN® A 85 P 5090FR

New development polyether-based Thermoplastic Polyurethane

PRODUCT DESCRIPTION

IROGRAN® A 85 P 5090FR is a high flame-retardant, halogen-free, polyether-based Thermoplastic Polyurethane (TPU) for extrusion and injection molding applications. Key features are excellent hydrolysis and microbial resistance, good oil & solvent resistance and excellent wear performance.

APPLICATIONS

Thick wall technical parts, thin wall technical parts, thick wall extrusion profiles and particularly suitable as jacketing material for electric vehicle charging cables.

TYPICAL PHYSICAL PROPERTIES

Properties	Key	NORM	Value	Unit
Hardness (after 3 sec.)	M	ISO 7619	88	Shore A
Hardness (after 3 sec.)	M	ISO 7619	39	Shore D
Density	M	ISO 1183-1	1,23	g/cm ³
Tensile strength	M	DIN 53504	35	MPa
Elongation @ break	M	DIN 53504	550	%
Tensile stress @ 100% elongation	M	DIN 53504	7,8	MPa
Tensile stress @ 300% elongation	M	DIN 53504	12,0	MPa
Tear strength	M	ISO 34-1	55	N/mm
Abrasion	M	ISO 4649	35	mm ³
Bayshore rebound resilience	M	ASTM D 2632	32	%
Compression set at 70h @ 23°C	M	ISO 815	24	%
Compression set at 24h @ 70°C	M	ISO 815	36	%
Mold shrinkage	M	ISO 294-4	1,3	%
Softening range low	E	Huntsman TMA	160	°C
Softening range high	E	Huntsman TMA	170	°C
Vicat softening point VST/A120	M	ISO 306	155	°C

Certificates

UL 94 - V0

M = Injection molded parts to meet DIN & ASTM requirements. Parts tempered for 20 hrs @ 100 °C prior to testing
E = Extruded film cut to ASTM requirements. Parts at room temperature aged prior to testing.



HEALTH & SAFETY ADVICE

Before undertaking any trials with this product it is essential that all personnel are aware of the necessary precautions that must be taken. These are detailed in the relevant Material Safety Data Sheet (MSDS), which will be provided by Huntsman.

SUPPLY & STORAGE

IROGRAN® A 85 P 5090FR is supplied in bags, drums or octabins. Please contact your customer service to confirm this.

IROGRAN® A 85 P 5090FR has a minimum expected shelf life of 12 months after shipment date. The product should be stored in a dry and cool place in the manufacturer's original packaging.

MATERIAL PREPARATION

IROGRAN® A 85 P 5090FR is supplied pre-dried, however to ensure trouble-free processing it is preferable to dry before use. The recommended drying conditions are:

- 3 - 4 hours at 105-110°C in circulating air
- 4 - 6 hours at 100-105°C in dehumidified air
- Dew point: -30°C

PHYSICAL FORM

Type: Opaque pellets

For further information, please contact your nearest sales office: http://www.huntsman.com/PU_customer_service

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