Enriching lives through innovation

Product Data Sheet

IROGRAN® A 85 P 4666

Polyether-based Thermoplastic Polyurethane

PRODUCT DESCRIPTION

IROGRAN® A 85 P 4666 is a polyether-based Thermoplastic Polyurethane (TPU) for extrusion and injection molding applications. Key features are excellent hydrolysis and microbial resistance, good oil & solvent resistance, excellent wear performance, resistance to dynamic stress and glossy surface.

APPLICATIONS

Thin wall technical parts, thin wall extrusion profiles, spiral hoses and cable jacketing.

TYPICAL PHYSICAL PROPERTIES

Properties	Key	NORM	Value	Unit
Hardness (after 3 sec.)	M	ISO 7619	84	Shore A
Hardness (after 3 sec.)	M	ISO 7619	31	Shore D
Density	M	ISO 1183-1	1,15	g/cm³
Tensile strength	M	DIN 53504	35	MPa
Elongation @ break	M	DIN 53504	720	%
Tensile stress @ 100% elongation	M	DIN 53504	5,7	MPa
Tensile stress @ 300% elongation	M	DIN 53504	9,0	MPa
Tear strength	M	ISO 34-1	45	N/mm
Abrasion	M	ISO 4649	45	mm³
Bayshore rebound resilience	M	ASTM D 2632	45	%
Compression set at 70h @ 23°C	M	ISO 815	25	%
Compression set at 24h @ 70°C	M	ISO 815	42	%
Mold shrinkage	M	ISO 294-4	0,9	%
Softening range low	E	Huntsman TMA	155	°C
Softening range high	E	Huntsman TMA	170	°C

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 4666 is supplied in bags, drums or octabins. Please contact your customer service to confirm this.
IROGRAN® A 85 P 4666 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 4666 is supplied pre-dried, however to ensure trouble-free processing it is preferable to dry before use. The recommended drying conditions are:
- 3 hours at 80-90°C in circulating air
- 3 hours at 70-80°C in dehumidified air
- Dew point: -30°C

PHYSICAL FORM

Type: Transparent pellets

PROCESSING PARAMETERS

Melt Volume Rate 190°C / 21,6kg ISO 1133-1 = 55 cm³/10min

Processing Parameter:	Extrusion
Temperature Profile	°C
Feed Zone:	25 - 40
Barrel:	175 - 190
Die Head:	185 - 195
Nozzle:	170 - 180

The recommended electron beam dose is 150 kGr.