

Product Data Sheet**IROGRAN® A 85 P 4441 FCM**

Polyether-based Thermoplastic Polyurethane

PRODUCT DESCRIPTION

IROGRAN® A 85 P 4441 FCM is a food contact approved polyether-based Thermoplastic Polyurethane (TPU) for extrusion and injection molding applications. Key features are excellent hydrolysis and microbial resistance, excellent wear performance, robust processing and matte surface.

APPLICATIONS

Thick wall technical parts, thin wall extrusion profiles, thick wall extrusion profiles and spiral hoses.

TYPICAL PHYSICAL PROPERTIES

Properties	Key	NORM	Value	Unit
Hardness (after 3 sec.)	M	ISO 7619	87	Shore A
Hardness (after 3 sec.)	M	ISO 7619	38	Shore D
Density	M	ISO 1183-1	1,11	g/cm ³
Tensile strength	M	DIN 53504	40	MPa
Elongation @ break	M	DIN 53504	650	%
Tensile stress @ 100% elongation	M	DIN 53504	7,3	MPa
Tensile stress @ 300% elongation	M	DIN 53504	11,0	MPa
Tear strength	M	ISO 34-1	60	N/mm
Abrasion	M	ISO 4649	35	mm ³
Bayshore rebound resilience	M	ASTM D 2632	38	%
Compression set at 70h @ 23°C	M	ISO 815	24	%
Compression set at 24h @ 70°C	M	ISO 815	42	%
Mold shrinkage	M	ISO 294-4	0,8	%
Softening range low	E	Huntsman TMA	155	°C
Softening range high	E	Huntsman TMA	175	°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 4441 FCM is supplied in bags, drums or octabins. Please contact your customer service to confirm this.

IROGRAN® A 85 P 4441 FCM 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 4441 FCM 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 100-110°C in circulating air
- 3 hours at 80-90°C in dehumidified air
- Dew point: -30°C

PHYSICAL FORM

Type: Opaque pellets

PROCESSING PARAMETERS

Melt Volume Rate 190°C / 21,6kg ISO 1133-1 = 65 cm³/10min

Processing parameter:	Extrusion
Temperature Profile	°C
Feed Zone	25 - 40
Barrel	175 - 185
Die Head	185 - 195
Nozzle	170 - 200

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

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