

**Product Data Sheet****IROGRAN® A 95 K 4977**

Polycaprolactone-based Thermoplastic Polyurethane

PRODUCT DESCRIPTION

IROGRAN® A 95 K 4977 is a polycaprolactone-based Thermoplastic Polyurethane (TPU) for injection molding applications. Key features are good oil & solvent resistance, low compression set, excellent wear performance, durability, resistance to dynamic stress, short cycle times and high melt stability.

APPLICATIONS

Thick wall technical parts, thin wall technical parts and seals and gaskets.

TYPICAL PHYSICAL PROPERTIES

Properties	Key	NORM	Value	Unit
Hardness (after 3 sec.)	M	ASTM D 2240	94	Shore A
Hardness (after 3 sec.)	M	ASTM D 2240	46	Shore D
Density	M	ASTM D 792	1.20	g/cm ³
Tensile strength	M	ASTM D 412	5800	psi
Elongation @ break	M	ASTM D 412	510	%
Tensile stress @ 20% elongation	M	ASTM D 412	1380	psi
Tensile stress @ 50% elongation	M	ASTM D 412	1770	psi
Tensile stress @ 100% elongation	M	ASTM D 412	2000	psi
Tensile stress @ 300% elongation	M	ASTM D 412	3250	psi
Tear strength	M	ASTM D 624	760	pli
Abrasion	M	ISO 4649	30	mm ³
Bayshore rebound resilience	M	ASTM D 2632	29	%
Compression set at 70h @ 23°C	M	ASTM D 395	15	%
Compression set at 22h @ 70°C	M	ASTM D 395	25	%
Compression set at 22h @ 100°C	M	ASTM D 395	30	%
Compression set at 70h @ 100°C	M	ASTM D 395	35	%
Mold shrinkage	M	ASTM D 955	1.3	%
Softening range low	E	Huntsman TMA	210	°C
Softening range high	E	Huntsman TMA	220	°C
Vicat softening point VST/A120	M	ASTM D 1525	170	°C

M = Injection molded parts to meet DIN & ASTM requirements. Parts tempered for 20 hrs @ 120 °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 95 K 4977 is supplied in bags, drums or octabins. Please contact your customer service to confirm this.

IROGRAN® A 95 K 4977 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 95 K 4977 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 rough cut granules

PROCESSING PARAMETERS

Melt Volume Rate 210°C / 21,6kg ASTM 1238 = 70 cm³/10min

Processing Parameter: Injection Molding

Temperature Profile °C

Feed Zone: 25 - 40

Barrel: 205 - 215

Nozzle: 210 - 220

Mold: 20 - 50

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

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