

Product Data Sheet**IROGRAN® A 92 K 5031**

Polyether-based Thermoplastic Polyurethane

PRODUCT DESCRIPTION

IROGRAN® A 92 K 5031 is a polyether-based Thermoplastic Polyurethane (TPU) for injection molding applications. Key features are excellent hydrolysis and microbial resistance, good oil & solvent resistance, low compression set, excellent wear performance, durability, short cycle times and robust processing.

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	ISO 7619	92	Shore A
Hardness (after 3 sec.)	M	ISO 7619	46	Shore D
Density	M	ISO 1183-1	1,13	g/cm ³
Tensile strength	M	DIN 53504	54	MPa
Elongation @ break	M	DIN 53504	550	%
Tensile stress @ 20% elongation	M	DIN 53504	5,7	MPa
Tensile stress @ 50% elongation	M	DIN 53504	8,2	MPa
Tensile stress @ 100% elongation	M	DIN 53504	11,4	MPa
Tensile stress @ 300% elongation	M	DIN 53504	18,0	MPa
Tear strength	M	ISO 34-1	72	N/mm
Abrasion	M	ISO 4649	20	mm ³
Bayshore rebound resilience	M	ASTM D 2632	41	%
Compression set at 70h @ 23°C	M	ISO 815	14	%
Compression set at 24h @ 70°C	M	ISO 815	26	%
Compression set at 24h @ 100°C	M	ISO 815	33	%
Compression set at 70h @ 100°C	M	ISO 815	50	%
Mold shrinkage	M	ISO 294-4	1,0	%
Softening range low	E	Huntsman TMA	180	°C
Softening range high	E	Huntsman TMA	195	°C
Vicat softening point VST/A120	M	ISO 306	150	°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 92 K 5031 is supplied in bags, drums or octabins. Please contact your customer service to confirm this.

IROGRAN® A 92 K 5031 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 92 K 5031 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 210°C / 21,6kg ISO 1133-1 = 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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