



PRODUCT DATA

IROGRAN A 78 P 4766 NM

Thermoplastic Polyurethane

INTRODUCTION

IROGRAN A 78 P 4766 NM is a high performance polyether based thermoplastic polyurethane intended for extrusion and injection moulding applications.

IROGRAN A 78 P 4766 NM is part of the HUNTSMAN technical extrusion product range and offers a specially designed, flexible material with a broad processing window particularly suitable for the preparation of tubing, cable jacketing and technical mouldings.

IROGRAN A 78 P 4766 NM is a development product.

PERFORMANCE FEATURES

- Good flame retardant properties
- High tensile strength
- Excellent wear performance
- Excellent microbial resistance
- Good low temperature flexibility

Table 1: Typical Physical Properties

Physical Properties							
Property	Key	DIN	Unit	Value	ASTM	Unit	Value
Hardness	M	53505	Shore A	77	D-2240	Shore A	77
Hardness	M	53505	Shore D	27	D-2240	Shore D	27
Tensile Strength	M	53504	MPa	30	D-412	psi	3700
Elongation @ break	M	53504	%	610	D-412	%	680
100% Modulus	M	53504	MPa	5.5	D-412	psi	740
300% Modulus	M	53504	MPa	10.5	D-412	psi	1350
Tear Resistance	M	53515	N/mm	45	D-624	pli	460
Abrasion	M	53516	mm ³	60		in ³	0.0035
Specific Gravity	M	53479		1.15	D-792		1.15

M = Injection moulded parts to meet DIN & ASTM requirements. Parts tempered for 20hrs @ 100°C prior to testing



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POLYMER SELECTION

Before selecting this product it is necessary that the user ensures the product performance will meet all operational and end use requirements. Having satisfied these requirements, should changes be contemplated in method of application, materials, service conditions or any other change that could affect the ultimate performance of the end product, then further tests and trials should be carried out. For assistance with particular problems and applications, please contact the IROGRAN TPU Technical Service Department.

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 Safety Data Sheet, which will be provided by HUNTSMAN.

SUPPLY & STORAGE

IROGRAN TPU is supplied in the form of pellets in 25kg moisture guarded sacks, 40 per pallet and shrink-wrapped.

IROGRAN TPU has an expected shelf life of minimum 12 months after shipment date. The product should be stored in a dry and cool place in the manufacturer's original packaging.

PHYSICAL FORM

Type: Pellet
Average size: 3mm [0.125 in]
Bulk Density: 680kg/m³ [42lb/ft³]

MATERIAL PREPARATION

IROGRAN TPU grades are supplied pre-dried in moisture guarded sacks. To ensure trouble free processing it is preferable to dry IROGRAN TPU. 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: -22°F / -30°C

For further advice on the use of additives during the processing please contact the IROGRAN TPU Technical Service Department.

PROCESSING PARAMETERS

Table 2: Typical Processing Parameters

Processable using: Extrusion
Injection Moulding

Melt Volume Rate
[190°C/10Kg] 50 cm³/10 min

Extrusion

Temperature Profile	°C	°F
Feed Zone	25-40	77-104
Barrel	165-190	329-374
Adapter	175-195	347-383
Die Head	175-200	347-392
Nozzle	170-200	338-392

Injection Moulding

Temperature Profile	°C	°F
Heating Zone	175-195	347-383
Nozzle	180-200	356-392
Melt Temperature	170-195	338-383
Mould Temperature	20-70	68-158

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