

### Hytrel<sup>®</sup> SC988 NC010 THERMOPLASTIC POLYESTER ELASTOMER

Common features of Hytrel® thermoplastic polyester elastomer include mechanical and physical properties such as exceptional toughness and resilience, high resistance to creep, impact and flex fatigue, flexibility at low temperatures and good retention of properties at elevated temperatures. In addition, it resists many industrial chemicals, oils and solvents. Special grades include heat stabilised, flame retardant, food contact compliant, blow molding and extrusion grades. Concentrates offered include black pigments, UV protection additives, heat stabilisers, and flame retardants. Hytrel® thermoplastic polyester elastomer is plasticiser free.

The good melt stability of Hytrel® thermoplastic polyester elastomer normally enables the recycling of properly handled production waste. If recycling is not possible, we recommend, as the preferred option, incineration with energy recovery (-24 kJ/g of base polymer) in appropriately equipped installations.

For disposal, local regulations have to be observed.

Hytrel® thermoplastic polyester elastomer typically is used in demanding applications in the automotive, fluid power, electrical/electronic, consumer goods, appliance and power tool, sporting goods, furniture, industrial and off-road transportation/equipment industry.

Hytrel® SC988 NC010 is the highest modulus grade, with nominal hardness of 82D, contains a non-discoloring stabilizer. Can be processed by various thermoplastic processing techniques. Developed for applications such as parts for the healthcare industry.

#### SPECIAL CONTROL for HEALTHCARE APPLICATIONS

This product is manufactured according to Good Manufacturing Practice (GMP) principles and generally accepted in food contact applications in the USA when meeting applicable use conditions. This product is also tested against ISO 10993-5 and -11 and selected parts of USP Class VI. For details, individual compliance statements are available from our representative.

Product information Resin Identification Part Marking Code	TPC-ET >TPC-ET<		ISO 1043 ISO 11469
Rheological properties			
Melt volume-flow rate Temperature Load	12 240 2.16		ISO 1133
Melt mass-flow rate	13	g/10min	ISO 1133
Moulding shrinkage, parallel	1.6	%	ISO 294-4, 2577
Moulding shrinkage, normal	1.6	%	ISO 294-4, 2577
Typical mechanical properties			
Tensile modulus	1200	MPa	ISO 527-1/-2
Tensile stress at yield	36	MPa	ISO 527-1/-2
Tensile strain at yield	19	%	ISO 527-1/-2
Stress at 10% strain	35	MPa	ISO 527-1/-2
Tensile stress at 50% strain, 1BA	28	MPa	ISO 527-1/-2
Tensile stress at break	46	MPa	ISO 527-1/-2
Nominal strain at break	340	%	ISO 527-1/-2
Tensile strain at break	>300	%	ISO 527-1/-2
Flexural modulus	1200	MPa	ISO 178
Charpy notched impact strength, 23°C	15	kJ/m²	ISO 179/1eA

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5 11 5.5 0.44 -84 70 76	kJ/m² kJ/m² kJ/m² °C	ISO 179/1eA ISO 179/1eA ISO 180/1A ISO 180/1A ISO 974 ISO 48-4 / ISO 868 ISO 868 ISO 34-1
50 105 150	0° °C °C	ISO 11357-1/-3 ISO 11357-1/-3 ISO 75-1/-2 ISO 306 ISO 306
145 <sup>[DS]</sup>	E-6/K	ISO 11359-1/-2
150 <sup>[DS]</sup>	E-6/K	ISO 11359-1/-2
		IEC 60695-11-10 IEC 60695-11-10
0.6 0.3 1280	% % kg/m³	Sim. to ISO 62 Sim. to ISO 62 Sim. to ISO 62 ISO 1183
2 - 3 ≤0.08 250 240 260 50 45 55	h % °C °C °C °C °C	
	$\begin{array}{c} 5\\ 11\\ 5.5\\ 0.44\\ -84\\ 70\\ 76\\ 230\\ 221\\ 50\\ 105\\ 150\\ 213\\ 145^{[DS]}\\ 150^{[DS]}\\ 150^{[DS]}\\$	$\begin{array}{cccc} -84 & ^{\circ}C \\ 70 \\ 76 \\ 230 & \text{KN/m} \end{array}$ $\begin{array}{cccc} 221 & ^{\circ}C \\ 50 & ^{\circ}C \\ 105 & ^{\circ}C \\ 150 & ^{\circ}C \\ 213 & ^{\circ}C \\ 145^{[DS]} & \text{E-6/K} \end{array}$ $\begin{array}{cccc} 145^{[DS]} & \text{E-6/K} \end{array}$ $\begin{array}{cccc} \text{HB} & \text{class} \\ 150^{[DS]} & \text{E-6/K} \end{array}$ $\begin{array}{cccc} \text{HB} & \text{class} \\ 1.5 & \text{mm} \end{array}$ $\begin{array}{cccc} 0.2 & \% \\ 0.6 & \% \\ 0.3 & \% \\ 1280 & \text{kg/m}^3 \\ 1130 & \text{kg/m}^3 \end{array}$

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### Extrusion

Drying Temperature	100 - 120	°C
Drying Time, Dehumidified Dryer	2 - 3	h
Processing Moisture Content	≤0.06	%
Melt Temperature Optimum	240	°C

### Characteristics

Processing

Injection Moulding, Film Extrusion, Extrusion, Sheet Extrusion, Other Extrusion, Casting, Thermoforming

Delivery form

Special characteristics

Pellets

Light stabilised or stable to light

Revised: 2025-04-19 Source: Celanese Materials Database

NOTICE TO USERS: Values shown are based on testing of laboratory test specimens and represent data that fall within the standard range of properties for natural material. These values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes. Colourants or other additives may cause significant variations in data values. Properties of moulded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design not intended for use in medical or dental implants. Regardless of any such product designation, any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use. To the best of our knowledge, the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy and completeness of such information. The information contained in this publication as a promise or guarantee of specific properties of our groucts. It is the sole responsibility of the users to investigate whether any existing patents are infringed by the use of the materials mentioned in this publication. Moreover, there is a need to reduce human exposure to many materials to the lowest practical limits in view of possible adverse effects. To the extent that any hazards may have been mentioned in this publication, we neither suggest nor guarantee that such hazards are the only ones that exist. We recommend that persons intending to rely on any recommendation or to use any equipment, processing technique or material mentioned in this publication should satisfy themselves that they can meet all applicable safety and health standards. We strongly recommend that users seek and adhere to the

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