



The TPU is the link between the thermoplastic polymers and rubbers.

With the firsts shares **the ability to thermoform**, due to heat, even after hardening; with the latter **the elasticity**.

In other words, in the field of elastomers, it is the polymer with the best mechanical properties, excellent flexibility in the absence of plasticizers, even in the case of high hardness, as well as resistance to low temperatures, light, aging and bacterial attack.

The Industria Chimica Mediterranea transforms TPUs of different nature: **aromatic polyethers and polyesters**, for applications that need flexibility, strength and toughness, and **aliphatic**, where light stability, transparency and strong adhesion are required.

The range of hardness varies from 60 to 98 Shore A, the thickness range goes from 100 to 1000 microns.

The manufacturing process of the Industria Chimica Mediterranea, which does not involve dissolution in solvent, but melting by heat, makes it a material with a **low environmental impact**, interesting for all those sectors where an extremely resistant, elastic and waterproof support is required.

NO TPU
WAS HARMED IN THE MAKING
OF THIS PICTURE.



**ELASTIC
POWER**
FILM IN TPU

VISHNU

Aromatic Polyester

Medium hardness and modulus to balance elongation and abrasion resistance.

PHYSICAL PROPERTIES	VALUE	STANDARD
HARDNESS	70 Shore A	ASTM D 2240
ELONGATION AT BREAK	550%	ASTM D882
TENSILE STRENGTH	35 MPa	ASTM D882
ABRASION RESISTANCE	35 mm ³	ISO 20871

KALI

Aromatic Polyester

Specific for those applications that require resistance to abrasion/tearing and elongation.

PHYSICAL PROPERTIES	VALUE	STANDARD
HARDNESS	84 Shore A	ASTM D 2240
ELONGATION AT BREAK	500%	ASTM D882
TENSILE STRENGTH	38 MPa	ASTM D882
ABRASION RESISTANCE	50 mm ³	ISO 20871

GANESH

Aromatic Polyester

Elevated hardness and modulus for superior mechanical properties. High transparency, hydrolysis and UV stabilised.

PHYSICAL PROPERTIES	VALUE	STANDARD
HARDNESS	91 Shore A	ASTM D 2240
ELONGATION AT BREAK	400%	ASTM D882
TENSILE STRENGTH	50 MPa	ASTM D882
ABRASION RESISTANCE	20 mm ³	ISO 20871

DEVI

Aromatic Polyether

Excellent low temperature flexibility, transparency, stability to hydrolysis and resistance to bacterial attack. Suitable for food contact.

PHYSICAL PROPERTIES	VALUE	STANDARD
HARDNESS	85 Shore A	ASTM D 2240
ELONGATION AT BREAK	500%	ASTM D882
TENSILE STRENGTH	40 MPa	ASTM D882
ABRASION RESISTANCE	30 mm ³	ISO 20871

DEVI SOFT

Aromatic Polyether

Excellent low temperature flexibility, transparency, stability to hydrolysis and resistance to bacterial attack. Suitable for food contact.

PHYSICAL PROPERTIES	VALUE	STANDARD
HARDNESS	77 Shore A	ASTM D 2240
ELONGATION AT BREAK	550%	ASTM D882
TENSILE STRENGTH	32 MPa	ASTM D882
ABRASION RESISTANCE	28 mm ³	ISO 4649 method A

SHIVA

Aliphatic Polyether

Not-yellowing polyether-based aliphatic TPU elastomeric film. Excellent low temperature performance, transparency, hydrolysis stability and resistance to bacterial attack.

PHYSICAL PROPERTIES	VALUE	STANDARD
HARDNESS	80 Shore A	ASTM D 2240
ELONGATION AT BREAK	550%	ASTM D412
TENSILE STRENGTH	15 MPa	ASTM D412
ABRASION RESISTANCE	5 mm ³	ASTM G154

KARMA GRS

Recycled

TPU-based multilayer support with low environmental impact, containing a significant percentage of recycled sources. The selection of raw materials used guarantees high mechanical performance in full compliance with the criteria of the GLOBAL RECYCLED STANDARD and sustainable production.

PHYSICAL PROPERTIES	VALUE	STANDARD
RECYCLED SOURCE PERCENTAGE	>50%	
MARTINADALE ABRASION RESISTANCE	>100.000 Cicli	ISO 5470
BALLY FLEX RESISTANCE	>250.000 Cicli	ISO 32100

KARMA BIO

Bio Based

Eco-sustainable TPU-based multilayer support, obtained from renewable raw materials and able to offer a real alternative to those produced synthetically. Its main feature is the combination of the highest possible content of bio-based raw materials with the same level of performance as products deriving from fossil sources.

PHYSICAL PROPERTIES	VALUE	STANDARD
PERCENTAGE RENEWABLE SOURCE	60/70%	
MARTINADALE ABRASION RESISTANCE	>100.000 Cicli	ISO 5470
BALLY FLEX RESISTANCE	>250.000 Cicli	ISO 32100

KARMA RECYCLE

Recyclable

High-performance, recyclable multilayer support made of thermoplastic polyurethane. It is characterized by the absence of solvents, resistance to elongation in both directions, flexibility and soft touch.

PHYSICAL PROPERTIES	VALUE	STANDARD
PERCENTAGE OF RECYCLABILITY	100%	
MARTINADALE ABRASION RESISTANCE	>100.000 Cicli	ISO 5470
BALLY FLEX RESISTANCE	>250.000 Cicli	ISO 32100

DRAGON SKIN

TPU/PU

Water-based aliphatic polyurethane film which improves heat and yellowing resistance. Silky touch and deep colour.





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