



# TPV ELASTOPRENE®

SERIE NE - EXTRUSION PROCESSES

## PRODUCT

Dynamically vulcanized thermoplastic (TPV) is a particular type of thermoplastic elastomer (TPE) which offers much better results given the exclusive combination of an elastomeric phase deeply dispersed in a continuous thermoplastic phase.

TPV Elastoprene® is a mixture of polypropylene and dynamically vulcanised EPDM rubber (PP/EPDM), with properties similar to those of other rubber products but with better results than traditional plastic materials. Its composition makes it compatible and particularly suitable for the co-extrusion processes of polypropylene profiles.

Due to the enormous advantages of processability, vulcanized rubber materials are being substituted by TPV Elastoprene®, using the traditional technology in the transformation of plastic. Furthermore, with the excellent properties obtained, TPV Elastoprene® is replacing plastic materials like PVC.

TPV Elastoprene® is completely recyclable and reusable, safe to the environment, thus improving the overall profitability of the process; an added advantage to rubber production and manufacture.

## PROPERTIES

TPV Elastoprene® has good resistance to the effects of the ozone, UV and diverse chemical products, with an operating temperature from -60 to 135°C.

Its mechanical properties are related to the grade of hardness according to the table below:

Properties <sup>1</sup>	Method	Unit	N55A-E	N58A-E	N67A-E	N73A-E	N80A-E	N87A-E	N90A-E	N50D-E
Hardness extruded profile	ISO 868 (5s)	Shore A	55	58	67	73	80	87	92	50 Sh-D
Hardness injected plaque			62	65	75	80	85	91	96	54 Sh-D
Density	ISO 1183	Spec. Grav.	0.95	0.95	0.95	0.95	0.95	0.96	0.96	0.96
Tensile strength	ISO 37	Mpa	4.5	6	7	8	11	12	14	25
Elongation		%	300	350	390	400	450	490	500	600
Modulus 100%		Mpa	2.5	3	3.5	4	5	6	8	12
Compression Set 22h@70°C	ISO 815	%	32	35	36	37	40	45	50	65
Tear Strength @23°C	ISO 34	N/mm	7	8	9	9	15	20	30	50
Brittle point	ISO 812	°C	-60	-60	-60	-60	-55	-51	-50	-45
Colour	-	-	Black	Black	Black	Black	Black	Black	Black	Black

1.- The results were obtained using 2mm injected plaques.

New grades of TPV Elastoprene® are developed on demand for our customers, to satisfy specific requirements for products and processes.



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## APPLICATIONS

The excellent properties of this material make it ideal for the demanding requirements of the automobile industry.

Its principal application is for extruded or PP co-extruded sealing profiles, for both the interior and exterior of vehicles. It is possible to obtain finished products in flock, adhesive tape, etc.

In the construction industry, profile parts can be used for insulation, protectors and for embellishments on doors and windows.

## TRANSFORMING PROCESS

Traditional machinery is used for the transformation of plastic. TPV Elastoprene® comes in pellet form. Given that this material is hygroscopic, previous drying is recommended (2h@80°C).

Non-conform products, processing scraps, ... can be remanufactured with the addition in a maximum recommended proportion of 20% of the used material without affecting the properties of the end product.

The recommended manufacture of TPV Elastoprene® for typical applications is:

Parameter	Unit	Temperature
Melt temperature	°C	170 ÷ 200 (gradually increased by zones)
Die temperature	°C	200 ÷ 215

## CONTACT

There are TPV ELASTOPRENE® grades for INJECTION and BLOW-MOLDING processes, for more information visit our website: [www.elastoprene.com](http://www.elastoprene.com)

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