

PROFLEX™ TP50V is a pre-formulated and pelletized general-purpose thermoplastic elastomer compound based on PP and EPDM.

It is designed for the over-molding of soft-touch elastomer components onto hard olefin thermoplastics such as PP, PE resins. This material exhibits excellent flow properties and offers molded articles with fine texture, dry surface and excellent rubbery feeling.

PROFLEX™ TP-V series has high temperature resistance equivalent to general purpose EPDM rubber compounds while fluid resistance is comparable to general purpose polychloroprene rubber compound. It also has wide service temperature range (-40°C to 130°C). It is suitable for soft parts exposed to sub-zero temperature because of its excellent low temperature brittleness.

PROFLEX™ TP-V series is processed on standard thermoplastic equipment. It can be injection molded, extruded, blow molded and thermoformed with the efficiency and economy associated with the thermoplastic material. Further, clean scrap from these processes can be recycled

CHARACTERISTICS	METHODS	TYPICAL VALUE
PRODUCT FORM	VISUAL	PELLET
COLOUR	VISUAL	NATURAL
SPECIFIC GRAVITY	ASTM D792	0.91±0.02
HARDNESS (SHORE A)	ASTM D2240	50 ± 3
TENSILE STRENGTH (kg/cm ²)	ASTM D412	28 ± 5
ELONGATION (%)	ASTM D412	320 ± 50
100% FLEXDULE MODULUS (kg/cm ²)	ASTM D412	23 ± 5
TEAR STRENGTH (kg/cm)	ASTM D624	17 ± 4
MELT FLOW INDEX (5kgs at 180°C)	ASTM D1238	4 ± 2

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PROCESSING GUIDE

PROFLEX™ TP50V rubber is a versatile material and can be processed by using high shear rate injection molding methods. Stability of **PROFLEX™ TP50V** is excellent at normal processing temperature. However should inadvertent loss of temperature control lead to decomposition the degradation products are non-corrosive. Generally, it reacts the same as other easy molding thermoplastics, such as polystyrenes. The finished parts have sharp and well defined details.

Typical starting conditions for a reciprocating screw injection molding machine are listed in the accompanying chart. These values are intended only as guidelines, and the optimum conditions will vary from machine to machine.

SUGGESTED PROCESSING CONDITIONS:

DRYING	: 60°C / 1 – 2 HOURS
BARREL TEMPERATURE	
Feed	: 160 – 180 °C
Rear	: 170 – 190 °C
Front	: 180 – 200 °C
Nozzle	: 180 – 210 °C
MOLD TEMPERATURE	: 15 °C TO 35 °C
INJECTION PRESSURE	
Boost	: 250 – 650 psi
Hold	: 50 – 70% of Boost
Back Pressure	: 50 – 150 psi
INJECTION RATE	: Fast
SCREW SPEED	: 30 – 80 rpm
HOLD TIME	: 1 – 3 sec (Thin Part)
	: 5 – 10 sec (Thick Part)

DATE: 2015.01



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