



Processing Conditions and Molding Guidelines

Nylabond™ 7091 Series Thermoplastic Vulcanizate (TPV)

Typical Injection Molding Conditions

Temperatures	English	SI Metric
Rear Zone	510-550 °F	266-288 °C
Center Zone	520-560 °F	271-293 °C
Front Zone	530-570 °F	277-299 °C
Melt	545-570 °F	285-299 °C
Mold	185-225 °F	85-107 °C

Pressures

Back	25-100 psi	0.4-1.4MPa
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Speeds

Fill	0.5- 3.5 in/sec	13-76 mm/sec
Screw	100-200 rpm	100-200 rpm

Drying – Desiccant Type Dryer

Dew Point set at -40 °F		
Time & Temperature	4-6 Hrs at 200-225 °F	4-6 Hrs at 82 -107 °C
Moisture Content	0.08%	0.08%

Molding Tips To Achieve A Good Bond

- Wall thickness of the TPE overmold can affect bond performance, 1-3 mm (0.04-0.12 in) is generally recommended
- Increased melt temperature generally improves bond performance
- Increased mold temperature generally improves bond performance
- Two-shot molding is better than insert molding for bond performance
- Preheating inserts to a minimum of 100°C (212°F) can improve bond performance
- Minimize storage time and handling of inserts prior to overmolding
- Fillers and reinforcements, lubricants, additives, color masterbatches and pigments, release agents, and stabilizers can all affect bond performance. Filler or reinforcement in the polyamide should be below 30% by weight
- Bond performance should be evaluated after conditioning for 24 hours at room temperature

This information is intended to be used only as a guideline for designers and processors of modified thermoplastics for injection molding. Because injection mold design and processing is complex, a set solution will not solve all problems. Observation on a "trial and error" basis may be required to achieve desired results.

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