

## Enflex S3090A

### Product Description:

90 Shore A TPE (Styrenic Block Copolymer based) available in both black and natural for injection molding and extrusion applications. This grade offers soft/tactile feel, adhesion (overmolding or co-extrusion) to Polypropylene, good weatherability.

Properties	Value	Unit	Standard
<b>Physical</b>			
Hardness - Injection Molded, 10 sec	92	Shore A	ASTM D2240
Hardness - Extruded, 10 sec	90	Shore A	ASTM D2240
Density	0.89	g/cm <sup>3</sup>	ASTM D792
<b>Mechanical</b>			
Tensile Strength at Break	1,900 (13.1)	psi (MPa)	ASTM D412
Elongation at Break	650	%	ASTM D412
100% Modulus	765 (5.3)	psi (MPa)	ASTM D412
Tear Strength	360 (63)	lbs/in (kN/m)	ASTM D624
<b>Compression Set</b>			
22h / 23 °C	29	%	ASTM D395B
22h / 70 °C	44	%	ASTM D395B
<b>Service Temperatures</b>			
Brittleness Point	-60	°C	ASTM D746
Dynamic Service Temperature	90	°C	
<b>Rheology</b>			
Melt Flow Rate, 230°C / 2.16kg load	3.0	g/cm <sup>3</sup>	ASTM D1238

### Features

Good Heat Resistance (up to 70°C)  
 Rubberlike Elasticity with good compression set (up to 70°C)  
 Ease of Coloring by proper masterbatch (PP/PE preferred)  
 Ease of processing  
 Recyclability  
 Overmold adhesion to Polypropylene and TPO

### Environmental Resistance

Ozone – Excellent  
 UV – Good to Excellent  
 Water – Excellent  
 Alcohol – Excellent  
 Oils and solvents – Good  
 Detergent – Good  
 Weak Acids and Bases – Good to excellent

Plant Location:  
 616 111<sup>th</sup> St.  
 Arlington, TX 76011  
 Ph # (817) 635-4770

Headquarters:  
 1900 Summit Tower Blvd  
 Suite 900  
 Orlando, FL 32810  
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**ISO 9001-2008**

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## **Processing Parameters**

### **Drying Conditions**

It is not necessary to pre-dry this material but in the event of moisture accumulation or evidence of splay, the material can be dried for 2-3 hours at 150 -160°F (66 – 71°C).

### **Injection Molding Conditions**

Temperatures:

Rear: 340 – 390°F (171 - 200°C)  
Middle: 350 – 410°F (177 – 210°)  
Front: 375 – 430°F (191 – 221°C)  
Nozzle: 390 – 445°F (200 – 230°C)  
Melt Temperature: 390 – 430°F (200– 220°C)  
Mold Temperature: 50 – 120°F (10 – 50°C)

Injection Pressure: 750 – 1300psi

Injection Speed: Fast (0.5 – 2.0 Seconds)

Screw Speed: 50 – 200 rpm

Hold Times: 5-7 seconds

Cushion: 0.2 - 0.5 inch

Cooling Times: 30 – 50

Clamp Tonnage: 2.0 to 3.5 tons/in<sup>2</sup>

### **Extrusion Conditions**

Screw: L/D 20:1 or greater (L/D 24:1 preferred)

Temperatures:

Feed Throat: 320-350°F (160 – 180°C)  
Feed Zone: 340 – 375°F (170 – 190°C)  
Compression Zone: 355 – 390°F (180 – 200°C)  
Metering Zone: 375 – 410°F (190 – 210°C)  
Die/Adapter: 375 – 410°F (190 – 210°C)  
Melt Temperature: 375 – 390°F (190 – 200°C)  
Cooling Water: 60 – 85°F (15-30°C)

Screw Speed: 100 - 200 rpm

Screen Pack: 20/40/60

†The data listed here fall within the normal range of product properties, but they should not be used to establish specification limits or used alone as a basis for design. This information is not intended as a warranty of any kind. Buyers must make their own representative test and assume all risks of use, whether used alone or in combination with other products. Ravago Manufacturing Americas, LLC assumes no obligation or liability of any advice furnished by it or results obtained with respect to these products. All warranties expressed or implied including warranties of merchantability for a particular purpose or use are excluded and disclaimed. Ravago Manufacturing Americas, LLC assumes no liability for use of products in infringement of any patent. The foregoing limitation of remedy and exclusion of liability is reflected in and is part of the consideration for the price, at which the products are sold by Ravago Manufacturing Americas, LLC. All data displayed herein has been obtained via testing of injected molded specimens of natural color. Pigmentation may affect certain properties to various degrees.

\*This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

‡ Shrinkage data are general guidelines and are only intended to allow comparison to other materials. They should not be used as the sole source of information for generating core and cavity mold dimensions.

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