



The Leader in Total TPE Solutions

# Dynaflex® G7970-1001-00

Thermoplastic Elastomer Compound

## Technical Data Sheet

May 14, 2009

<p><b><u>Product Description</u></b></p> <p>Dynaflex® G7970-1001-00 is an easy processing, general purpose TPE designed for a wide variety of applications, including those where FDA compliance is required.</p> <p>*Made with Kraton® Polymer</p>	<p><b><u>Features</u></b></p> <ul style="list-style-type: none"> <li>-Soft Touch</li> <li>-Rubbery Feel</li> <li>-Overmold Adhesion to Polypropylene</li> <li>-Automotive FMVSS 302</li> </ul>
<p><b><u>Color</u></b></p> <p>Natural</p>	<p><b><u>Processing Method</u></b></p> <p>Extrusion, Injection Molding</p>

<b>Mechanical Properties</b>	<b>English</b>	<b>SI</b>	<b>Test Method</b>
Shore Hardness, 10 sec delay	70 A	70 A	ASTM D2240
Specific Gravity	1.18	1.18	ASTM D792, 23/23°C
Tensile Strength	1060 psi	7308 kPa	ASTM D412-Die C, 2hrs,23°C
Elongation at Break	690 %	690 %	ASTM D412-Die C, 2hrs,23°C
100% Modulus	380 psi	2620 kPa	ASTM D412-Die C, 2hrs,23°C

300% Modulus	490 psi	3378 kPa	ASTM D412-Die C, 2hrs,23°C
Tear Strength	160 pli	28 kN/m	ASTM D624

<b>Thermal/Rheological Properties</b>	<b>English</b>	<b>SI</b>	<b>Test Method</b>
Melt Flow Rate @ 190°C, 2160g	1 g/10 min	1 g/10 min	ASTM D 1238
Melt Flow Rate @ 200°C, 5000g	36 g/10 min	36 g/10 min	ASTM D 1238
Apparent Viscosity @ 200°C 11170/sec	9900 cPs	10 Pa-sec	ASTM D 3835

<b>Aged Properties</b>	<b>English</b>	<b>SI</b>	<b>Test Method</b>
Compression Set, 22 hrs @ RT	20 %	20 %	ASTM D 395B

<b>Electrical/Flammability Properties</b>	<b>Value</b>	<b>Test Method</b>
Flame Rating 1.5 mm	HB	UL 94

<b>Regulatory Information</b>	<b>Yes/No</b>
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FDA

Yes

NSF

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### Coloring

Color concentrates with polypropylene (PP), ethylene vinyl acetate (EVA), or low density polyethylene (PE) carriers are most suitable for coloring Dynaflex® G7970-1001-00. Improved color dispersion can be achieved by using higher melt flow concentrates (with a melt flow from 25 - 40 g/10 min). Typical loadings for color concentrates are 1% to 5% by weight. Liquid color can be used, but mineral oil based carriers may have a significant effect on the final hardness value. Concentrates based on PVC should not be used. A high color match consistency can be obtained by using precolored compounds available from GLS. The final determination of color concentrate suitability should be determined by customer trials.

### Purging

Purge thoroughly before and after use of this product with a low flow (0.5 - 2.5 MFR) polyethylene (PE) or polypropylene (PP).

### Regrind

Regrind levels up to 20% can be used with Dynaflex® G7970-1001-00 with minimal property loss, provided that the regrind is free of contamination. To minimize losses during molding, the melt temperature should remain as low as possible. The final determination of regrind effectiveness should be determined by the customer.

### Shrinkage Properties

Flow

#### English

0.006 - 0.012 in/in

#### SI

0.006 - 0.012 mm/mm

#### Test Method

ASTM D 955

## Residence Time

Dynaflex® G7970-1001-00 has excellent melt stability. Maximum residence times may vary, depending on the size of the barrel. Generally, the barrel should be emptied if it is idle for periods of 8 - 10 minutes or longer.

## Drying Time

English

SI

Drying is not Required

## Molding Temperatures

English

SI

Rear

330 - 350 °F

166 - 177 °C

Center

350 - 380 °F

177 - 193 °C

Front

370 - 440 °F

188 - 227 °C

Nozzle

380 - 440 °F

193 - 227 °C

Mold

60 - 100 °F

16 - 38 °C

## Molding Parameters

English

SI

Screw Speed	40 - 100 rpm	40 - 100 rpm
Injection Speed	1 - 3 in/sec	25 - 76 mm/sec
1st Stage - Boost Pressure	350 - 900 psi	2413 - 6205 kPa
2nd Stage - Hold Pressure	30 % of Boost	70 % of Boost
Back Pressure	0 - 120 psi	0 - 827 kPa
Hold Time (Thick Part)	3 - 10 sec	3 - 10 sec
Hold Time (Thin Part)	1 - 3 sec	1 - 3 sec

### **Notes**

The properties shown are typical values and are not intended as product specifications. The test methods referenced are modifications of the ASTM and ISO procedures listed. All tests are conducted on injection molded samples. No warranties, expressed or implied, including patent warranties, or warranties of merchantability or fitness for use, are made with respect to the product information described above.

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