

# Dynaflex™ G7930-1 NSFG

## Thermoplastic Elastomer

### Key Characteristics

#### Product Description

Dynaflex™ G7930-1 NSFG is a NSF 51 (food equipment) approved material suitable for a wide variety of applications.

- NSF 51 approved
- FDA (see Notes)
- Overmold Adhesion to Polypropylene
- Soft Touch, Rubbery Feel

#### General

Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Latin America • North America	
Features	• Good Colorability • Good Flow	• Good Processability • Good Processing Stability	• Recyclable Material
Uses	• Consumer Applications • Flexible Grips • Food Service Applications • Gaskets	• Household Goods • Kitchenware • Non-specific Food Applications • Overmolding	• Seals • Soft Touch Applications
Agency Ratings	• FDA 21 CFR 177.2600 <sup>1</sup>	• NSF STD-51	
RoHS Compliance	• RoHS Compliant		
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Injection Molding		

### Technical Properties<sup>2</sup>

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	1.05	1.05	ASTM D792
Melt Mass-Flow Rate (MFR) (200°C/5.0 kg)	30 g/10 min	30 g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.013 to 0.021 in/in	1.3 to 2.1 %	ASTM D955
Elastomers	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Stress <sup>3,4</sup> (100% Strain, 73°F (23°C))	130 psi	0.896 MPa	ASTM D412
Tensile Stress <sup>3,4</sup> (300% Strain, 73°F (23°C))	200 psi	1.38 MPa	ASTM D412
Tensile Strength <sup>3,4</sup> (Break, 73°F (23°C))	480 psi	3.31 MPa	ASTM D412
Tensile Elongation <sup>3,4</sup> (Break, 73°F (23°C))	650 %	650 %	ASTM D412
Tear Strength	100 lbf/in	17.5 kN/m	ASTM D624
Compression Set (73°F (23°C), 22 hr)	13 %	13 %	ASTM D395B
Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Durometer Hardness (Shore A, 10 sec)	30	30	ASTM D2240
Fill Analysis	Typical Value (English)	Typical Value (SI)	Test Method
Apparent Viscosity 392°F (200°C), 11200 sec <sup>-1</sup>	6.40 Pa·s	6.40 Pa·s	ASTM D3835

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**Additional Information**

Dynaflex™ G7930-1 NSFG can be recycled as a filler or impact modifier for polyolefins, or can be recycled by grinding and reintroduction to the molding process. Similar to PP or PE recycling process, if separated appropriately, it can be recycled many times.

Municipality waste stream recycle code is "7" which is designated for "Other".

Please contact GLS Thermoplastic Elastomers for a copy of our Recyclability Compliance letter.

**Processing Information**

Injection	Typical Value (English)	Typical Value (SI)
Suggested Max Regrind	20 %	20 %
Rear Temperature	320 to 370 °F	160 to 188 °C
Middle Temperature	350 to 380 °F	177 to 193 °C
Front Temperature	370 to 410 °F	188 to 210 °C
Nozzle Temperature	370 to 420 °F	188 to 216 °C
Mold Temperature	60 to 100 °F	16 to 38 °C
Back Pressure	0.00 to 120 psi	0.00 to 0.827 MPa
Screw Speed	40 to 100 rpm	40 to 100 rpm

**Injection Notes**

Color concentrates with polypropylene (PP), ethylene vinyl acetate (EVA), or low density polyethylene (PE) carriers are most suitable for coloring Dynaflex™ G7930-1 NSFG. 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.

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

Regrind levels up to 20% can be used with Dynaflex™ G7930-1 NSFG 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.

Dynaflex™ G7930-1 NSFG 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 is not Required

Injection Speed: 1 to 3 in/sec  
 1st Stage - Boost Pressure: 200 to 900 psi  
 2nd Stage - Hold Pressure: 50% of Boost  
 Hold Time (Thick Part): 3 to 10 sec  
 Hold Time (Thin Part): 1 to 3 sec

**Notes**

<sup>1</sup> Please contact GLS Thermoplastic Elastomers for a copy of the FDA compliance letter.

<sup>2</sup> Typical values are not to be construed as specifications.

<sup>3</sup> Die C

<sup>4</sup> 2 hr

## CONTACT INFORMATION

**North America**

Avon Lake, United States  
33587 Walker Road  
Avon Lake, OH, United States ,  
44012  
+1 440 930 1000  
+1 844 4AVIENT

**South America**

Sao Paulo, Brazil  
Av. Francisco Nakasato, 1700  
13295-000 Itupeva  
Sao Paulo, Brazil  
+55 11 4593 9200

**Asia**

Shanghai, China  
2F, Block C  
200 Jinsu Road  
Pudong, 201206  
Shanghai, China  
+86 (0) 21 6028 4888

**Europe**

Pommerloch, Luxembourg  
19 Route de Bastogne  
Pommerloch, Luxembourg , L-9638  
+352 269 050 35



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