# Dynaflex™ G7980-9 NSFG

## Thermoplastic Elastomer

### Key Characteristics

| Product Description |
|---|
| Dynaflex™ G7980-9 NSFG is a NSF 51 (food equipment) approved material suitable for a wide variety of applications.<br>-NSF 51 approved<br>-FDA (see Notes)<br>-Overmold Adhesion to Polypropylene<br>-Soft Touch, Rubbery Feel |

| General | | | |
|---|---|---|---|
| Material Status | • Commercial: Active | | |
| Regional Availability | • Africa & Middle East<br>• Asia Pacific | • Latin America<br>• North America | |
| Features | • Good Flow<br>• Good Processability | • Good Processing Stability<br>• Recyclable Material | |
| Uses | • Consumer Applications<br>• Flexible Grips<br>• Food Service Applications | • Gaskets<br>• Household Goods<br>• Kitchenware | • Non-specific Food Applications<br>• Overmolding<br>• Seals |
| Agency Ratings | • FDA 21 CFR 177.1210 [1] | • NSF STD-51 | |
| RoHS Compliance | • RoHS Compliant | | |
| Appearance | • Black | | |
| Forms | • Pellets | | |
| Processing Method | • Injection Molding | | |

### Technical Properties [2]

| Physical | Typical Value (English) | Typical Value (SI) | Test Method |
|---|---|---|---|
| Density / Specific Gravity | 1.18 | 1.18 | ASTM D792 |
| Melt Mass-Flow Rate (MFR) (200°C/5.0 kg) | 54 g/10 min | 54 g/10 min | ASTM D1238 |
| Molding Shrinkage - Flow | 6.0E-3 to 0.011 in/in | 0.60 to 1.1 % | ASTM D955 |
| **Elastomers** | **Typical Value (English)** | **Typical Value (SI)** | **Test Method** |
| Tensile Stress [3, 4] (100% Strain, 73°F (23°C)) | 530 psi | 3.65 MPa | ASTM D412 |
| Tensile Stress [3, 4] (300% Strain, 73°F (23°C)) | 590 psi | 4.07 MPa | ASTM D412 |
| Tensile Strength [3, 4] (Break, 73°F (23°C)) | 980 psi | 6.76 MPa | ASTM D412 |
| Tensile Elongation [3, 4] (Break, 73°F (23°C)) | 620 % | 620 % | ASTM D412 |
| Tear Strength | 190 lbf/in | 33.3 kN/m | ASTM D624 |
| Compression Set (73°F (23°C), 22 hr) | 26 % | 26 % | ASTM D395B |
| **Hardness** | **Typical Value (English)** | **Typical Value (SI)** | **Test Method** |
| Durometer Hardness (Shore A, 10 sec) | 80 | 80 | ASTM D2240 |
| **Fill Analysis** | **Typical Value (English)** | **Typical Value (SI)** | **Test Method** |
| Apparent Viscosity | | | ASTM D3835 |
| 392°F (200°C), 11200 sec^-1 | 10.9 Pa·s | 10.9 Pa·s | |

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| Additional Information |
|---|

Dynaflex™ G7980-9 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 | 330 to 370 °F | 166 to 188 °C |
| Middle Temperature | 350 to 370 °F | 177 to 188 °C |
| Front Temperature | 370 to 440 °F | 188 to 227 °C |
| Nozzle Temperature | 370 to 440 °F | 188 to 227 °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 |
|---|

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

Regrind levels up to 20% can be used with Dynaflex™ G7980-9 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™ G7980-9 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: 350 to 900 psi
2nd Stage - Hold Pressure: 30% of Boost
Hold Time (Thick Part): 3 to 10 sec
Hold Time (Thin Part): 1 to 3 sec

### Notes

[1] Please contact GLS Thermoplastic Elastomers for a copy of the FDA compliance letter.

[2] Typical values are not to be construed as specifications.

[3] Die C

[4] 2 hr

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