

Dynaflex™ G7920-1001-00

Thermoplastic Elastomer

Key Characteristics

Product Description

Dynaflex™ G7920-1001-00 is an easy processing, general purpose TPE designed for a wide variety of applications, including those where FDA compliance is required.

- Non-Slip Grip
- 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 | • General Purpose • Good Colorability | • Good Flow • Good Processability | • Good Processing Stability • Recyclable Material |
| Uses | • Consumer Applications • Flexible Grips • Gaskets | • General Purpose • Household Goods • Overmolding | • Seals • Soft Touch Applications • Sporting Goods |
| Agency Ratings | • FDA 21 CFR 177.2600 ¹ | | |
| RoHS Compliance | • RoHS Compliant | | |
| Appearance | • Natural Color | | |
| Forms | • Pellets | | |
| Processing Method | • Injection Molding | | |

Technical Properties²

| Physical | Typical Value (English) | Typical Value (SI) | Test Method |
|--------------------------------------------------------------|-------------------------|--------------------|-------------|
| Density / Specific Gravity | 1.01 | 1.01 | ASTM D792 |
| Molding Shrinkage - Flow | 0.020 to 0.026 in/in | 2.0 to 2.6 % | ASTM D955 |
| Elastomers | Typical Value (English) | Typical Value (SI) | Test Method |
| Tensile Stress (100% Strain) | 111 psi | 0.764 MPa | ASTM D412 |
| Tensile Strength ^{3, 4} (Break, 73°F (23°C)) | 307 psi | 2.12 MPa | ASTM D412 |
| Tensile Elongation ^{3, 4} (Break, 73°F (23°C)) | 680 % | 680 % | ASTM D412 |
| Tear Strength | 49.0 lbf/in | 8.58 kN/m | ASTM D624 |
| Compression Set (73°F (23°C), 22 hr) | 17 % | 17 % | ASTM D395 |
| Hardness | Typical Value (English) | Typical Value (SI) | Test Method |
| Durometer Hardness (Shore A, 10 sec) | 21 | 21 | ASTM D2240 |
| Fill Analysis | Typical Value (English) | Typical Value (SI) | Test Method |
| Apparent Viscosity 392°F (200°C), 11200 sec ⁻¹ | 6.60 Pa·s | 6.60 Pa·s | ASTM D3835 |

Additional Information

Dynaflex™ G7920-1001-00 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 | 25.0 to 120 psi | 0.172 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™ G7920-1001-00. 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.

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™ G7920-1001-00 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.

Dynaflex™ G7920-1001-00 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 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

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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