

# Dynaflex™ G2701-1000-02

Thermoplastic Elastomer

PolyOne Corporation

Message:

Dynaflex™G2701-1000-02 is an easy-to-process TPE designed for injection molding and extrusion molding applications that require compliance with FDA standards.

can be bonded to polypropylene

Excellent coloring

Strong ozone resistance and UV resistance

Strong fluidity, suitable for long and narrow, thin-walled parts

Similar to rubber

Soft to the touch

| General Information                  |                                        |                   |             |
|--------------------------------------|----------------------------------------|-------------------|-------------|
| Features                             | Good UV resistance                     |                   |             |
|                                      | Recyclable materials                   |                   |             |
|                                      | Good coloring                          |                   |             |
|                                      | High liquidity                         |                   |             |
|                                      | Ozone resistance                       |                   |             |
| Uses                                 | overmolding                            |                   |             |
|                                      | Thin wall parts                        |                   |             |
|                                      | Personal care                          |                   |             |
|                                      | Transparent or Translucent Accessories |                   |             |
|                                      | Consumer goods application field       |                   |             |
| Agency Ratings                       | FDA 21 CFR 177.2600 2                  |                   |             |
| RoHS Compliance                      | RoHS compliance                        |                   |             |
| Appearance                           | Translucent                            |                   |             |
| Forms                                | Particle                               |                   |             |
| Processing Method                    | Extrusion                              |                   |             |
|                                      | Injection molding                      |                   |             |
| Physical                             | Nominal Value                          | Unit              | Test Method |
| Specific Gravity                     | 0.898                                  | g/cm <sup>3</sup> | ASTM D792   |
| Melt Mass-Flow Rate (MFR)            |                                        |                   | ASTM D1238  |
| 190°C/2.16 kg                        | 13                                     | g/10 min          | ASTM D1238  |
| 200°C/5.0 kg                         | 61                                     | g/10 min          | ASTM D1238  |
| Molding Shrinkage - Flow             | 0.50 - 1.1                             | %                 | ASTM D955   |
| Hardness                             | Nominal Value                          | Unit              | Test Method |
| Durometer Hardness (Shore A, 10 sec) | 66                                     |                   | ASTM D2240  |
| Elastomers                           | Nominal Value                          | Unit              | Test Method |

|                                                      |               |      |             |
|------------------------------------------------------|---------------|------|-------------|
| Tensile Stress <sup>1</sup>                          |               |      | ASTM D412   |
| 100% strain, 23°C <sup>2</sup>                       | 3.38          | MPa  | ASTM D412   |
| 300% strain, 23°C <sup>3</sup>                       | 4.43          | MPa  | ASTM D412   |
| Tensile Strength (Break, 23°C)                       | 7.58          | MPa  | ASTM D412   |
| Tensile Elongation (Break, 23°C)                     | 680           | %    | ASTM D412   |
| Tear Strength                                        | 42.0          | kN/m | ASTM D624   |
| Compression Set (23°C, 22 hr)                        | 24            | %    | ASTM D395B  |
| Fill Analysis                                        | Nominal Value | Unit | Test Method |
| Apparent Viscosity (200°C, 11200 sec <sup>-1</sup> ) | 11.0          | Pa·s | ASTM D3835  |

#### Additional Information

Dynaflex™ G2701-1000-02 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.

| Injection             | Nominal Value | Unit |
|-----------------------|---------------|------|
| Suggested Max Regrind | 20            | %    |
| Rear Temperature      | 132 - 171     | °C   |
| Middle Temperature    | 154 - 193     | °C   |
| Front Temperature     | 168 - 207     | °C   |
| Nozzle Temperature    | 168 - 207     | °C   |
| Mold Temperature      | 15.6 - 26.7   | °C   |
| Back Pressure         | 0.345 - 1.03  | MPa  |
| Screw Speed           | 25 - 75       | rpm  |

#### Injection instructions

以聚丙烯 (PP), 乙烯醋酸乙烯共聚物 (EVA) 或低密度聚乙烯 (LDPE) 为基础的色母料最适合 Dynaflex™ G2701-1000-02 着色. 使用熔体流动速率较高(范围为 25 - 40 克/10 分钟)的色母料, 则能达到较好的颜色分散效果. 典型的色母料用量为 1% 至 5%(重量). 可以使用液体颜料, 但以矿物油为基础的载体对最终硬度值会有显著的影响. 不应采用以 PVC 为基础的色母料. 若使用 GLS 可供的预着色复合材料, 则可达到较好的配色一致性. 色母料是否适用, 应由用户通过试验来最终确定. 在使用此产品之前或之后, 均须用熔体流动速率较低 (0.5 - 2.5 MFR) 的聚乙烯 (PE) 或聚丙烯 (PP) 彻底进行置换. Dynaflex™ G2701-1000-02 可利用高达 20% 的回收料同时其性能所受影响却极小, 但该回收料必须是未受到污染的. 为了最大限度地减小模塑期间其性能所受的影响, 熔体温度应维持得尽可能低. 回收料的有效性应由用户最终确定. Dynaflex™ G2701-1000-02 具有极好的熔体稳定性. 最长停留时间可能会根据机筒尺寸有所变化. 通常, 如果机器闲置 8 - 10 分钟或以上, 则应将机筒排空. 不需要干燥注射速度: 1 - 5 英寸/秒 第一阶段 - 提升压力: 250 - 650 psi 第二阶段 - 保持压力: 70% 的升压保持时间(厚部件): 4 - 10 秒 保持时间(薄部件): 1 - 3 秒

#### NOTE

1. 2 hours
2. Mouth die c
3. C mould

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