# Versaflex™ VDT 5120-40N

Thermoplastic Elastomer

PolyOne Corporation

## Message:

Versaflex™ VDT 5120-40N is a vibration and impact damping TPE formulated to bond to a variety of standard and modified nylon materials, including those which are glass-filled, heat stabilized and/or impact modified

| General Information | |
|---|---|
| Features | Shock absorption |
| | Good adhesion |
| Uses | overmolding |
| | Power/other tools |
| | Home appliance components |
| | Application in Automobile Field |
| | Soft touch application |
| | Soft handle |
| | Sporting goods |
| | General |
| | Consumer goods application field |
| RoHS Compliance | RoHS compliance |
| Appearance | Natural color |
| Forms | Particle |
| Processing Method | Extrusion |
| | Injection molding |

| Physical | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Specific Gravity | 1.09 | g/cm³ | ASTM D792 |
| Molding Shrinkage - Flow | 3.1 - 3.9 | % | ASTM D955 |
| **Hardness** | **Nominal Value** | **Unit** | **Test Method** |
| Durometer Hardness (Shore A, 10 sec) | 42 | | ASTM D2240 |
| **Elastomers** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Stress [1] | | | ASTM D412 |
| 100% strain, 23°C [2] | 1.24 | MPa | ASTM D412 |
| 300% strain, 23°C [3] | 2.48 | MPa | ASTM D412 |
| Tensile Strength (Break, 23°C) | 4.07 | MPa | ASTM D412 |
| Tensile Elongation (Break, 23°C) | 750 | % | ASTM D412 |
| Tear Strength [4] (23°C) | 22.9 | kN/m | ASTM D624 |
| Compression Set (23°C) | 20 | % | ASTM D395B |

| Fill Analysis | Nominal Value | Unit | Test Method |
|---|---|---|---|
| Apparent Viscosity | | | ASTM D3835 |
| 200°C, 1340 sec^-1 | 134 | Pa·s | ASTM D3835 |
| 200°C, 11200 sec^-1 | 25.0 | Pa·s | ASTM D3835 |

| Injection | Nominal Value | Unit |
|---|---|---|
| Suggested Max Regrind | 20 | % |
| Rear Temperature | 182 - 204 | °C |
| Middle Temperature | 243 - 266 | °C |
| Front Temperature | 249 - 271 | °C |
| Nozzle Temperature | 254 - 277 | °C |
| Mold Temperature | 12.8 - 29.4 | °C |
| Back Pressure | 0.00 - 0.552 | MPa |

Injection instructions

Color concentrates based on Versaflex™ VDT 5120-40N are most suitable for coloring Versaflex™ VDT 5120-40N. Typical loadings for color concentrates are 1% to 4% by weight. 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 Versaflex™ VDT 5120-40N 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.Versaflex™ VDT 5120-40N 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 requiredInjection Speed: 3 to 5 in/sec1st Stage - Boost Pressure: 300 to 8000 psi2nd Stage - Hold Pressure: 0% of BoostHold Time (Thick Part): 0 to 4 secHold Time (Thin Part): 0 to 2 sec

| NOTE | |
|---|---|
| 1. | 2 hr |
| 2. | Mouth die c |
| 3. | C mould |
| 4. | C mould |



Recommended distributors for this material

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