



# Maxxam™ FR C5 T-GF/10 XF V0 EP NC 70

## Polypropylene Impact Copolymer

### Key Characteristics

#### Product Description

Maxxam™ FR flame-retardant polyolefin compounds and masterbatches meet stringent flammability performance requirements defined by industry agencies, including Underwriters Laboratories UL 94 V-0, performance ratings.

#### General

|                        |                                                                 |                                                               |                           |
|------------------------|-----------------------------------------------------------------|---------------------------------------------------------------|---------------------------|
| Material Status        | • Commercial: Active                                            |                                                               |                           |
| Regional Availability  | • Asia Pacific                                                  | • Europe                                                      | • North America           |
| Filler / Reinforcement | • Glass\Mineral, 10% Filler by Weight                           |                                                               |                           |
| Features               | • Flame Retardant<br>• Good Processability<br>• Good Stiffness  | • Good Strength<br>• Halogen Free<br>• High Impact Resistance | • Medium Flow             |
| Uses                   | • Consumer Applications<br>• Electrical/Electronic Applications | • General Purpose<br>• Household Goods                        | • Industrial Applications |
| RoHS Compliance        | • RoHS Compliant                                                |                                                               |                           |
| Forms                  | • Pellets                                                       |                                                               |                           |
| Processing Method      | • Injection Molding                                             |                                                               |                           |

### Technical Properties <sup>1</sup>

| Physical                                     | Typical Value (English)   | Typical Value (SI)     | Test Method  |
|----------------------------------------------|---------------------------|------------------------|--------------|
| Density <sup>2</sup> (73°F (23°C))           | 1.15 g/cm <sup>3</sup>    | 1.15 g/cm <sup>3</sup> | ISO 1183     |
| Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)    | 6.0 g/10 min              | 6.0 g/10 min           | ISO 1133     |
| Molding Shrinkage <sup>3</sup>               |                           |                        | ISO 294-4    |
| Across Flow : 73°F (23°C)                    | 0.80 to 1.2 %             | 0.80 to 1.2 %          |              |
| Flow : 73°F (23°C)                           | 0.80 to 1.2 %             | 0.80 to 1.2 %          |              |
| Mechanical                                   | Typical Value (English)   | Typical Value (SI)     | Test Method  |
| Tensile Modulus                              |                           |                        | ISO 527-2/1  |
| 73°F (23°C), 0.157 in (4.00 mm)              | 326000 psi                | 2250 MPa               |              |
| Tensile Stress                               |                           |                        | ISO 527-2/5  |
| Break, 73°F (23°C), 0.157 in (4.00 mm)       | 3630 psi                  | 25.0 MPa               |              |
| Tensile Strain                               |                           |                        | ISO 527-2/5  |
| Break, 73°F (23°C), 0.157 in (4.00 mm)       | 6.0 %                     | 6.0 %                  |              |
| Impact                                       | Typical Value (English)   | Typical Value (SI)     | Test Method  |
| Notched Izod Impact Strength (73°F (23°C))   | 5.5 ft·lb/in <sup>2</sup> | 12 kJ/m <sup>2</sup>   | ISO 180      |
| Unnotched Izod Impact Strength (73°F (23°C)) | 14 ft·lb/in <sup>2</sup>  | 30 kJ/m <sup>2</sup>   | ISO 180      |
| Thermal                                      | Typical Value (English)   | Typical Value (SI)     | Test Method  |
| Heat Deflection Temperature                  |                           |                        | ISO 75-2/B   |
| 66 psi (0.45 MPa), Unannealed                | 311 °F                    | 155 °C                 |              |
| Heat Deflection Temperature                  |                           |                        | ISO 75-2/A   |
| 264 psi (1.8 MPa), Unannealed                | 158 °F                    | 70.0 °C                |              |
| Vicat Softening Temperature                  | 275 °F                    | 135 °C                 | ISO 306/A120 |
| Melting Temperature                          | 320 to 329 °F             | 160 to 165 °C          |              |

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| Electrical                      | Typical Value (English) | Typical Value (SI) | Test Method    |
|---------------------------------|-------------------------|--------------------|----------------|
| Comparative Tracking Index      | 600 V                   | 600 V              | IEC 60112      |
| Flammability                    | Typical Value (English) | Typical Value (SI) | Test Method    |
| Flame Rating                    |                         |                    | UL 94          |
| 0.031 in (0.8 mm)               | V-2                     | V-2                |                |
| 0.06 to 0.13 in (1.6 to 3.2 mm) | V-0                     | V-0                |                |
| Glow Wire Flammability Index    |                         |                    | IEC 60695-2-12 |
| 0.04 to 0.12 in (1.0 to 3.0 mm) | 1760 °F                 | 960 °C             |                |
| Glow Wire Ignition Temperature  |                         |                    | IEC 60695-2-13 |
| 0.04 to 0.12 in (1.0 to 3.0 mm) | 1430 °F                 | 775 °C             |                |
| Oxygen Index                    | > 32 %                  | > 32 %             | ISO 4589-2     |

### Processing Information

| Injection              | Typical Value (English) | Typical Value (SI) |
|------------------------|-------------------------|--------------------|
| Drying Temperature     | 176 °F                  | 80.0 °C            |
| Drying Time            | 1.0 to 2.0 hr           | 1.0 to 2.0 hr      |
| Processing (Melt) Temp | 356 to 392 °F           | 180 to 200 °C      |

### Notes

<sup>1</sup> Typical values are not to be construed as specifications.

<sup>2</sup> ±0.03

<sup>3</sup> PolyOne Turkey method

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