

## Exxelor™ PO 1020

## Polymer Resin

## Product Description

Exxelor PO 1020 polymer resin is a high performance maleic anhydride functionalized homopolypropylene produced by reactive extrusion. It has been primarily designed to add polarity to polypropylene matrices and in particular to improve polypropylene reactivity with amino-silane treated glass reinforcements. Its high content of maleic anhydride allows its use at low treat levels while maintaining optimum application properties.

This grade is designed to:

- Function as a coupling agent between reinforcing materials, such as glass fibers and inorganic fillers, and polypropylene.
- Achieve compatibility in polypropylene/polyamide alloys.
- Achieve compatibility between polyolefins and more polar polymers that are capable of interacting with maleic anhydride for alloying, recycling or co-extrusion purposes.
- Improve polypropylene-to-metal adhesion properties.

## Key Features

Performance enhancements in glass-filled polypropylene:

- Improved cost/performance balance compared to earlier generation modifiers.
- Easy molding of highly glass-filled compounds and/or complex and thin parts due to its high flow properties.
- Outstanding unnotched Izod and Charpy impact performance.
- Excellent notched Izod and Charpy impact resistance.
- Improved tensile and flexural strength.

| Physical                                  | Typical Value (English) | Typical Value (SI)      | Test Based On     |
|---|-------------------------|-------------------------|-------------------|
| Density                                   | 0.900 g/cm <sup>3</sup> | 0.900 g/cm <sup>3</sup> | ExxonMobil Method |
| Melt Mass-Flow Rate (MFR)                 |                         |                         | ASTM D1238        |
| 190°C/1.2 kg                              | 112 g/10 min            | 112 g/10 min            |                   |
| 230°C/2.16 kg                             | 430 g/10 min            | 430 g/10 min            |                   |
| Melt Mass-Flow Rate (MFR)                 |                         |                         | ISO 1133          |
| 190°C/1.2 kg                              | 112 g/10 min            | 112 g/10 min            |                   |
| 230°C/2.16 kg                             | 430 g/10 min            | 430 g/10 min            |                   |
| Maleic Anhydride Graft Level <sup>2</sup> | High                    | High                    | FTIR EPK-04 QT-02 |
| Volatiles                                 | < 0.30 %                | < 0.30 %                | AM-S 350.03       |
| Thermal                                   | Typical Value (English) | Typical Value (SI)      | Test Based On     |
| Peak Melting Temperature                  | 324 °F                  | 162 °C                  | ExxonMobil Method |
| Optical                                   | Typical Value (English) | Typical Value (SI)      | Test Based On     |
| Yellowness Index                          | < 30 YI                 | < 30 YI                 | ASTM E313         |

