

# Polifil® PP RMT-20

Polypropylene Impact Copolymer

The Plastics Group

## Message:

Polifil® RMT series compounds are high impact polypropylenes reinforced with appearance-grade talc. In addition to high impact strength, they possess a high flex modulus and high heat deflection resistance. These compounds are used in automotive applications, major appliances, electrical goods, housewares, and other utility products. Standard processing techniques are applicable. Use this information as a guide to aid you in selecting the proper resin for your application. TPG will custom compound and fine-tune our formulations for your application.

| General Information                       |                           |                   |             |
|---|---------------------------|-------------------|-------------|
| UL YellowCard                             | E84888-101658928          |                   |             |
| Filler / Reinforcement                    | Talc,20% Filler by Weight |                   |             |
| Features                                  | High Heat Resistance      |                   |             |
|   | High Impact Resistance    |                   |             |
|   | Impact Copolymer          |                   |             |
| Uses                                      | Appliances                |                   |             |
|   | Automotive Applications   |                   |             |
|   | Electrical Parts          |                   |             |
|   | Household Goods           |                   |             |
| Forms                                     | Pellets                   |                   |             |
| Processing Method                         | Injection Molding         |                   |             |
| Physical                                  | Nominal Value             | Unit              | Test Method |
| Specific Gravity                          | 1.05                      | g/cm <sup>3</sup> | ASTM D792   |
| Melt Mass-Flow Rate (MFR) (230°C/2.16 kg) | 8.0 to 12                 | g/10 min          | ASTM D1238  |
| Molding Shrinkage - Flow (3.18 mm)        | 1.2                       | %                 | ASTM D955   |
| Hardness                                  | Nominal Value             | Unit              | Test Method |
| Durometer Hardness (Shore D)              | 72                        |                   | ASTM D1415  |
| Mechanical                                | Nominal Value             | Unit              | Test Method |
| Tensile Modulus (23°C)                    | 1720                      | MPa               | ASTM D638   |
| Tensile Strength (23°C)                   | 28.3                      | MPa               | ASTM D638   |
| Tensile Elongation                        |                           |                   | ASTM D638   |
| Yield, 23°C                               | 9.0                       | %                 |             |
| Break, 23°C                               | 35                        | %                 |             |
| Flexural Modulus - Tangent (23°C)         | 1760                      | MPa               | ASTM D790   |
| Flexural Strength (23°C)                  | 39.3                      | MPa               | ASTM D790   |
| Impact                                    | Nominal Value             | Unit              | Test Method |
| Notched Izod Impact (23°C)                | 59                        | J/m               | ASTM D256   |
| Gardner Impact (23°C, 12.7 mm)            | 5.20                      | J                 | ASTM D3029  |

| Thermal                           | Nominal Value  | Unit | Test Method |
|-----------------------------------|----------------|------|-------------|
| Deflection Temperature Under Load |                |      | ASTM D648   |
| 0.45 MPa, Unannealed              | 110            | °C   |             |
| 1.8 MPa, Unannealed               | 54.4           | °C   |             |
| Injection                         | Nominal Value  | Unit |             |
| Drying Temperature                | 82.2 to 104    | °C   |             |
| Drying Time                       | 1.0 to 2.0     | hr   |             |
| Rear Temperature                  | 199 to 210     | °C   |             |
| Middle Temperature                | 210 to 221     | °C   |             |
| Front Temperature                 | 221 to 232     | °C   |             |
| Nozzle Temperature                | 227 to 232     | °C   |             |
| Processing (Melt) Temp            | 204 to 260     | °C   |             |
| Mold Temperature                  | 10.0 to 26.7   | °C   |             |
| Injection Rate                    | Fast           |      |             |
| Back Pressure                     | 0.345 to 0.689 | MPa  |             |
| Screw Speed                       | 50 to 100      | rpm  |             |

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