

# TOTAL Polypropylene PPC 3645

Polypropylene Impact Copolymer

TOTAL Refining & Chemicals

Message:

Polypropylene PPC 3645 polypropylene is a nucleated heterophasic copolymer with a Melt Flow Index of 1.3 g/10 min. Polypropylene PPC 3645 polypropylene is characterized by improved stiffness, creep resistance and high impact resistance. Polypropylene PPC 3645 has been developed specifically for the extrusion of corrugated cardboard, corrugated and twin walled pipes, conduit pipe and other extrusion applications.

| General Information |                            |
|---------------------|----------------------------|
| Additive            | Nucleating agent           |
| Features            | Nucleated                  |
|                     | Rigid, good                |
|                     | Impact resistance, high    |
|                     | Good creep resistance      |
| Uses                | Bellows                    |
|                     | Piping system              |
| Agency Ratings      | EC 1907/2006 (REACH)       |
| RoHS Compliance     | RoHS compliance            |
| Forms               | Particle                   |
| Processing Method   | Pipeline extrusion molding |
|                     | Extrusion                  |

| Physical                                  | Nominal Value | Unit              | Test Method |
|-------------------------------------------|---------------|-------------------|-------------|
| Density                                   | 0.905         | g/cm <sup>3</sup> | ISO 1183    |
| Apparent Density                          | 0.53          | g/cm <sup>3</sup> | ISO 60      |
| Melt Mass-Flow Rate (MFR) (230°C/2.16 kg) | 1.3           | g/10 min          | ISO 1133    |
| Hardness                                  | Nominal Value | Unit              | Test Method |
| Rockwell Hardness (R-Scale)               | 82            |                   | ISO 2039-2  |
| Mechanical                                | Nominal Value | Unit              | Test Method |
| Tensile Modulus                           | 1500          | MPa               | ISO 527-2   |
| Tensile Stress (Yield)                    | 29.0          | MPa               | ISO 527-2   |
| Tensile Strain (Yield)                    | 6.0           | %                 | ISO 527-2   |
| Flexural Modulus                          | 1400          | MPa               | ISO 178     |
| Impact                                    | Nominal Value | Unit              | Test Method |
| Charpy Notched Impact Strength            |               |                   | ISO 179     |
| -20°C                                     | 10            | kJ/m <sup>2</sup> | ISO 179     |
| 23°C                                      | > 50          | kJ/m <sup>2</sup> | ISO 179     |

| Notched Izod Impact         |               |                   | ISO 180     |
|-----------------------------|---------------|-------------------|-------------|
| -20°C                       | 9.0           | kJ/m <sup>2</sup> | ISO 180     |
| 23°C                        | > 50          | kJ/m <sup>2</sup> | ISO 180     |
| Thermal                     | Nominal Value | Unit              | Test Method |
| Heat Deflection Temperature |               |                   |             |
| 0.45 MPa, not annealed      | 92.0          | °C                | ISO 75-2/B  |
| 1.8 MPa, not annealed       | 54.0          | °C                | ISO 75-2/A  |
| Vicat Softening Temperature |               |                   |             |
| --                          | 151           | °C                | ISO 306/A50 |
| --                          | 75.0          | °C                | ISO 306/B50 |
| Melting Temperature (DSC)   | 165           | °C                | ISO 3146    |
| Additional Information      |               |                   |             |

Notched Charpy Impact, ISO 179, 23°C: >50 kJ/m<sup>2</sup>Notched Izod Impact Strength, ISO 180, 23°C: >50 kJ/m<sup>2</sup>

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