# Trithene® TS 9022

Low Density Polyethylene

Petroquimica Triunfo

## Message:

Trithene®TS 9022 is a low density polyethylene material. This product is available in Latin America and is processed by film extrusion.
Trithene®The main features of TS 9022 are:
Good processability
Hard
accessible food
beautiful
Typical application areas include:
packing
Movie
food contact applications

| General Information | | | |
|---|---|---|---|
| Features | Rigidity, high<br>Optical<br>Workability, good<br>Compliance of Food Exposure | | |
| Uses | Packaging<br>Films | | |
| Agency Ratings | ANVISA n°105/99<br>ASTM D 1248, II, Class A, Cat. 3<br>FDA 21 CFR 177.1520(c) 2.1 | | |
| Forms | Particle | | |
| Processing Method | Film extrusion | | |
| **Physical** | **Nominal Value** | **Unit** | **Test Method** |
| Density | 0.931 | g/cm³ | ASTM D1505 |
| Melt Mass-Flow Rate (MFR) (190°C/2.16 kg) | 2.2 | g/10 min | ASTM D1238 |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Strength | | | ASTM D638 |
| Yield, molding | 14.0 | MPa | ASTM D638 |
| Fracture, molding | 12.0 | MPa | ASTM D638 |
| Tensile Elongation (Break, Compression Molded) | 520 | % | ASTM D638 |
| Coefficient of Friction (vs. Itself - Dynamic, Blown Film) | 0.12 | | ASTM D1894 |
| **Films** | **Nominal Value** | **Unit** | **Test Method** |
| secant modulus | | | ASTM D882 |

| | | | |
|---|---|---|---|
| 5% secant, MD: 50 µm, blown film | 150 | MPa | ASTM D882 |
| 5% secant, TD: 50 µm, blown film | 160 | MPa | ASTM D882 |
| Tensile Strength | | | ASTM D882 |
| MD: Broken, 50 µm, blown film | 20.0 | MPa | ASTM D882 |
| TD: Broken, 50 µm, blown film | 18.0 | MPa | ASTM D882 |
| Tensile Elongation | | | ASTM D882 |
| MD: Broken, 50 µm, blown film | 380 | % | ASTM D882 |
| TD: Broken, 50 µm, blown film | 680 | % | ASTM D882 |
| Dart Drop Impact (50 µm, Blown Film) | 100 | g | ASTM D1709A |
| Elmendorf Tear Strength | | | ASTM D1922 |
| MD: 50 µm, blown film | 330 | g | ASTM D1922 |
| TD: 50 µm, blown film | 230 | g | ASTM D1922 |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Vicat Softening Temperature | 102 | °C | ASTM D1525 |
| **Optical** | **Nominal Value** | **Unit** | **Test Method** |
| Gloss (60°, 50.0 µm, Blown Film) | 90 | | ASTM D2457 |
| Haze (50.0 µm, Blown Film) | 12 | % | ASTM D1003 |

**Additional Information**

Film properties taken from 50 µm blown film produced on a 50 mm extruder, L/D=25, die gap=1.0 mm, BUR=2.3:1Melt Mass-Flow Rate, ASTM D1238, 190°C/2.16 kg: 1.8 to 2.6 g/10 minDensity, ASTM D1505: 0.929 to 0.933 g/cm³

| Extrusion | Nominal Value | Unit |
|---|---|---|
| Cylinder Zone 1 Temp. | 150 - 160 | °C |
| Cylinder Zone 2 Temp. | 160 - 170 | °C |
| Cylinder Zone 3 Temp. | 165 - 170 | °C |
| Adapter Temperature | 165 - 175 | °C |

**Extrusion instructions**

Recommended Blow Up Ratio: 2-3:1



## Recommended distributors for this material

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