

# Rotec® ABS TS 12

Acrylonitrile Butadiene Styrene

ROMIRA GmbH

## Message:

Rotec® ABS TS 12 is an acrylonitrile butadiene styrene (ABS) material. This product is available in Europe and is processed by extrusion or injection molding.

Rotec® The main features of ABS TS 12 are:

flame retardant/rated flame

Heat resistance

| General Information |                       |  |  |
|---------------------|-----------------------|--|--|
| Features            | Heat resistance, high |  |  |
| Forms               | Particle              |  |  |
| Processing Method   | Extrusion             |  |  |
|                     | Injection molding     |  |  |

| Physical                                  | Nominal Value | Unit              | Test Method |
|-------------------------------------------|---------------|-------------------|-------------|
| Density                                   | 1.05          | g/cm <sup>3</sup> | ISO 1183    |
| Melt Mass-Flow Rate (MFR) (220°C/10.0 kg) | 21            | g/10 min          | ISO 1133    |
| Molding Shrinkage                         | 0.30 - 0.70   | %                 | ISO 294-4   |
| Water Absorption (23°C, 24 hr)            | 0.30          | %                 | ISO 62      |

| Mechanical                           | Nominal Value | Unit | Test Method  |
|--------------------------------------|---------------|------|--------------|
| Tensile Modulus (23°C)               | 2600          | MPa  | ISO 527-2/1  |
| Tensile Stress (Yield, 23°C)         | 50.0          | MPa  | ISO 527-2/50 |
| Tensile Strain (Break, 23°C)         | 10            | %    | ISO 527-2/50 |
| Flexural Modulus <sup>1</sup> (23°C) | 2700          | MPa  | ISO 178      |
| Flexural Stress <sup>2</sup> (23°C)  | 78.0          | MPa  | ISO 178      |

| Impact                                  | Nominal Value | Unit              | Test Method |
|-----------------------------------------|---------------|-------------------|-------------|
| Charpy Notched Impact Strength (23°C)   | 13            | kJ/m <sup>2</sup> | ISO 179/1eA |
| Charpy Unnotched Impact Strength (23°C) | No Break      |                   | ISO 179/1eU |

| Thermal                     | Nominal Value | Unit     | Test Method |
|-----------------------------|---------------|----------|-------------|
| Vicat Softening Temperature | 101           | °C       | ISO 306/B50 |
| CLTE - Flow (23 to 55°C)    | 8.5E-5        | cm/cm/°C | ISO 11359-2 |
| Thermal Conductivity        | 0.18          | W/m/K    | DIN 52612   |

| Flammability           | Nominal Value | Test Method |
|------------------------|---------------|-------------|
| Flame Rating (1.50 mm) | HB            | UL 94       |

| Injection              | Nominal Value | Unit |
|------------------------|---------------|------|
| Drying Temperature     | < 85.0        | °C   |
| Drying Time            | 2.0 - 4.0     | hr   |
| Suggested Max Moisture | 0.050         | %    |
| Suggested Max Re grind | 5             | %    |

|                        |             |    |
|------------------------|-------------|----|
| Rear Temperature       | 230 - 250   | °C |
| Middle Temperature     | 230 - 250   | °C |
| Front Temperature      | 230 - 250   | °C |
| Processing (Melt) Temp | < 260       | °C |
| Mold Temperature       | 60.0 - 80.0 | °C |
| Injection Rate         | Fast        |    |

#### Injection instructions

Screw rotation speed: moderate to high Back pressure: low to moderate Injection pressure: tool depending

| Extrusion              | Nominal Value | Unit |
|------------------------|---------------|------|
| Drying Temperature     | < 80.0        | °C   |
| Drying Time            | 2.0 - 4.0     | hr   |
| Suggested Max Moisture | < 0.050       | %    |
| Cylinder Zone 1 Temp.  | 190 - 210     | °C   |
| Cylinder Zone 2 Temp.  | 190 - 210     | °C   |
| Cylinder Zone 3 Temp.  | 190 - 210     | °C   |
| Cylinder Zone 4 Temp.  | 190 - 210     | °C   |
| Cylinder Zone 5 Temp.  | 190 - 210     | °C   |
| Melt Temperature       | < 245         | °C   |

#### NOTE

1. 2.0 mm/min
2. 2.0 mm/min

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