



HiPrene[®] MT42HS

Polypropylene Compound

Product Description

HiPrene[®] MT42HS is a 20% mineral filled, impact modified polypropylene compound suitable for injection moulding. This material combines excellent impact/stiffness balance, high scratch resistance and good flowability. It gives a good surface quality and is especially designed for esthetical interior parts such as instrument panels, lower and upper dashboard, door panels and trims. This grade is available in natural or color-matched, pellet form.

Product Characteristic

| | |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Status | Commercial: Active |
| Test Method Used | ASTM |
| Availibility | Europe |
| Features | Scratch Resistance High Impact Resistance High Stiffness Good Processability |
| Typical Customer Applications | Automotive Interior Parts |

Typical Properties

| Physical | Symbol | Test Method | Unit | Value |
|--------------------------------------------|----------------------|-------------|-------------------|-------|
| Melt Mass-Flow Rate | MFR | ASTM D1238 | g/10min | 13 |
| Specific Gravity | ρ | ASTM D792 | g/cm ³ | 1,05 |
| Mechanical | Symbol | Test Method | Unit | Value |
| Tensile Stress @ Yield | σ_m | ASTM D638 | MPa | 22 |
| Tensile Strain @ Break | ϵ_{tB} | ASTM D638 | % | 150 |
| Flexural Modulus @ 23°C (2mm/min) | E_f | ASTM D790 | MPa | 2200 |
| Impact | Symbol | Test Method | Unit | Value |
| IZOD Impact Strength @ 23°C | $a_{IN23^\circ C}$ | ASTM D256 | kJ/m ² | 30 |
| Hardness | Symbol | Test Method | Unit | Value |
| Rockwell Hardness (R-Scale) | HR-R | ASTM D785 | - | 65 |
| Thermal | Symbol | Test Method | Unit | Value |
| Temperature of Deflection under Load (HDT) | T_f | ASTM D648 | °C | - |
| Volatile Matters | - | GS Method | % | 0,1 |
| Ash Content @ 600°C | Ash _{600°C} | GS Method | % | 21 |

Notes: Typical properties; not to be constructed as specification

Other Properties

| Property | Typical Value | Test Method |
|-----------------------------------------------------------|------------------|--------------|
| Scratch Resistance Test ² | $\Delta L = 1,1$ | acc. PV 3952 |
| Mould average Shrinkage-Flow Direction ³ | 0,9% | GS Method |
| Mould average Shrinkage-Cross Flow Direction ³ | 0,9% | GS Method |

² Performed on black plaques with rough structure

³ Values may only be used as indication and should not be used directly in mould design without prior validation

Processing Techniques

The actual conditions depends on the type of equipment used.

Injection Moulding

HiPrene MT42HS is easy to process with standard injection moulding machines. To avoid residual humidity from transport or storage, the material should be pre-dried approximately 2h at 80°C. Following moulding parameters should be used as guidelines:

| | |
|---------------------|-----------------|
| Feeding temperature | 40 – 80 °C |
| Melt temperature | 210 – 250 °C |
| Back pressure | Low to medium |
| Holding pressure | 40 – 65 bar |
| Mould temperature | 30 – 50 °C |
| Screw speed | Low to medium |
| Injection speed | 100 – 200 m/min |

Storage

This material should be stored in dry conditions, protected from sunlight and at temperatures below 50 °C.

Contact

GS Caltex Czech, s.r.o.

Bohumínská 455/20, Karviná – Staré Město (Nové Pole), 733 01

GPS: N49°52'003", E018°31'078"

Czech republic

tel.: 595 390 703; 595 390 724; 595 390 717