

Mahesh Manglesh Plastics Pvt. Ltd.

Importer, Distributor and Stockists of Engineering Polymer Materials

PA6, PA66, POM, PBT, TPU, TPE, ABS, PMMA, PC, PA46, PPS, PPA



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Comparison Between VYDYNE 41H & ZYTEL ST801

| Property | Vydyne 41H | Zytel ST801 |
|--|---|---|
| Base Polymer | PA66 (Polyamide 66) | PA66 (Polyamide 66; super toughened) |
| Modification | Impact modified, heat-stabilized | Super toughened, unreinforced |
| Density | 1.08 g/cm ³ | 1.08 g/cm ³ |
| Molding Shrinkage | 1.6–2.0% (across flow) | 1.4–1.8% (parallel/normal) |
| Water Absorption (24h) | 1.0% | 1.2% (immersion 24h, 2mm) |
| Equilibrium Water Abs. | 2.1% (50% RH) | 6.5% (2mm) |
| Tensile Modulus | 1860 MPa (dry), 1390 MPa (conditioned) | 2000 MPa (dry), 900 MPa (cond.) |
| Tensile Strength | 50 MPa (yield, dry), 35 MPa (yield, cond.) | 50 MPa (yield, dry), 43 MPa (yield, cond.) |
| Strain at Break | 50% (dry), 180% (cond.) | 40–50% |
| Flexural Modulus | 1750 MPa (dry), 545 MPa (cond.) | 1800 MPa (dry), 700 MPa (cond.) |
| Flexural Strength | 53 MPa (dry), 17 MPa (cond.) | 68 MPa |
| Impact Strength (Notched Charpy, 23°C) | 76 kJ/m ² (dry), 110 kJ/m ² (cond.) | 80–115 kJ/m ² |
| Impact Strength (Notched Izod, 23°C) | 78 kJ/m ² (dry), 88 kJ/m ² (cond.) | 80–90 kJ/m ² |
| Heat Deflection Temp (0.45 MPa) | 145°C | 132°C |
| Heat Deflection Temp (1.8 MPa) | 58°C | 64°C (dry), 71°C (annealed) |
| Melting Temperature | 260°C | 263°C |
| CLTE (thermal expansion) | 1.7E–4 cm/cm/°C (flow) | 120E–6/°C (parallel), 90E–6/°C (norm) |
| Volume Resistivity | 1E10 Ω·cm | 1E11–1E12 Ω·m |
| Dielectric Strength | 14 kV/mm | 31 kV/mm |
| Tracking Index | 600 V | 600 V |
| Flammability Rating | HB (0.75–3.00 mm) | HB (at 0.81–1.5 mm) |
| Glow Wire Flammability | 725–750°C | 725–750°C |
| Color/Appearance | Natural (Pellets) | Natural resin |
| Processing Method | Injection molding | Injection, extrusion molding |
| Typical Uses | Automotive, electrical, fasteners, gears | Automotive, furniture, appliances, sporting goods, construction |

Summary :-

This table focuses on main property groups relevant for engineering selection, summarizing typical values and ignoring minor grade variations.