# Stanyl® TW363

Polyamide 46

DSM Engineering Plastics

## Message:

Stanyl® TW363 is a Polyamide 46 (Nylon 46) material. It is available in Asia Pacific, Europe, or North America.
Important attributes of Stanyl® TW363 are:
Heat Stabilizer
Impact Modified

| General Information | |
|---|---|
| Additive | Heat Stabilizer<br>Impact Modifier |
| Features | Heat Stabilized<br>Impact Modified |
| Multi-Point Data | Isothermal Stress vs. Strain (ISO 11403-1)<br>Secant Modulus vs. Strain (ISO 11403-1) |

| Physical | Dry | Conditioned | Unit | Test Method |
|---|---|---|---|---|
| Density | 1.10 | -- | g/cm³ | ISO 1183 |
| Molding Shrinkage | | | | ISO 294-4 |
| Across Flow | 2.0 | -- | % | |
| Flow | 2.0 | -- | % | |
| Water Absorption (Equilibrium, 23°C, 50% RH) | 3.0 | -- | % | ISO 62 |
| **Mechanical** | **Dry** | **Conditioned** | **Unit** | **Test Method** |
| Tensile Modulus | | | | ISO 527-2 |
| -- | 1850 | 600 | MPa | |
| 120°C | 400 | -- | MPa | |
| 160°C | 350 | -- | MPa | |
| Tensile Stress | | | | ISO 527-2 |
| Yield | 60.0 | 45.0 | MPa | |
| Yield, 120°C | 35.0 | -- | MPa | |
| Yield, 160°C | 30.0 | -- | MPa | |
| Nominal Tensile Strain at Break | | | | ISO 527-2 |
| -- | > 50 | > 50 | % | |
| 120°C | > 50 | -- | % | |
| 160°C | > 50 | -- | % | |
| Flexural Modulus | | | | ISO 178 |
| -- | 1800 | 550 | MPa | |

| | | | | |
|---|---|---|---|---|
| 120°C | 400 | -- | MPa | |
| 160°C | 350 | -- | MPa | |
| Impact | Dry | Conditioned | Unit | Test Method |
| Charpy Notched Impact Strength | | | | ISO 179/1eA |
| -30°C | 26 | 30 | kJ/m² | |
| 23°C | 75 | 130 | kJ/m² | |
| Charpy Unnotched Impact Strength | | | | ISO 179/1eU |
| -30°C | No Break | No Break | | |
| 23°C | No Break | No Break | | |
| Notched Izod Impact Strength | | | | ISO 180/1A |
| -40°C | 40 | 40 | kJ/m² | |
| 23°C | 80 | 130 | kJ/m² | |
| Thermal | Dry | Conditioned | Unit | Test Method |
| Heat Deflection Temperature (1.8 MPa, Unannealed) | 90.0 | -- | °C | ISO 75-2/A |
| Melting Temperature [1] | 295 | -- | °C | ISO 11357-3 |
| CLTE | | | | ISO 11359-2 |
| Flow | 1.8E-5 | -- | cm/cm/°C | |
| Transverse | 2.0E-5 | -- | cm/cm/°C | |
| Thermal Index - 5000 hrs | 135 | -- | °C | IEC 60216 |
| Electrical | Dry | Conditioned | Unit | Test Method |
| Volume Resistivity | 1.0E+15 | 1.0E+9 | ohms·cm | IEC 60093 |
| Electric Strength | 25 | 15 | kV/mm | IEC 60243-1 |
| Comparative Tracking Index | 475 | -- | V | IEC 60112 |
| Injection | Dry | Unit | | |
| Drying Temperature | 80.0 | | °C | |
| Drying Time | 4.0 to 8.0 | | hr | |
| Rear Temperature | 280 to 320 | | °C | |
| Middle Temperature | 300 to 320 | | °C | |
| Front Temperature | 300 to 320 | | °C | |
| Nozzle Temperature | 300 to 320 | | °C | |
| Processing (Melt) Temp | 310 to 320 | | °C | |
| Mold Temperature | 80.0 to 120 | | °C | |
| Injection Rate | Moderate-Fast | | | |
| Back Pressure | 2.00 to 10.0 | | MPa | |
| Screw Compression Ratio | 2.5:1.0 | | | |
| NOTE | | | | |
| 1. | 10°C/min | | | |

## Recommended distributors for this material

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