

INEOS Terlux® 2802 TR Q434

Description: Terlux® 2802 TR Q434 is a new grade with enhanced toughness.
Information provided by STYROLUTION, which is a joint venture between BASF and INEOS

Physical Properties	Metric	English	Comments
Density	1.08 g/cc	0.0390 lb/in ³	ISO 1183
Water Absorption	0.70 %	0.70 %	ISO 62
Moisture Absorption at Equilibrium	0.35 %	0.35 %	23°C/50% RH; ISO 62

Linear Mold Shrinkage, Flow 0.0040 - 0.0070 cm/cm 0.0040 - 0.0070 in/in

Melt Flow	2.16 g/10 min @Load 10.0 kg, Temperature 220 °C	2.16 g/10 min @Load 22.0 lb, Temperature 428 °F	ISO 1133
	18.36 g/10 min @Load 21.6 kg, Temperature 220 °C	18.36 g/10 min @Load 47.6 lb, Temperature 428 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	84	84	ISO 2039-2
Ball Indentation Hardness	70.0 MPa @Load 36.5 kg, Time 30.0 sec	10200 psi @Load 80.5 lb, Time 0.00833 hour	ISO 2039-1
Tensile Strength, Yield	48.0 MPa	6960 psi	50mm/min; ISO 527-1/-2
Elongation at Break	12 %	12 %	Nominal; ISO 527-1/-2
Elongation at Yield	4.0 %	4.0 %	50mm/min; ISO 527-1/-2
Tensile Modulus	2.00 GPa	290 ksi	ISO 527-1/-2
Charpy Impact Unnotched	12.0 J/cm ² @Temperature -30.0 °C	57.1 ft-lb/in ² @Temperature -22.0 °F	ISO 179
	18.0 J/cm ² @Temperature 23.0 °C	85.7 ft-lb/in ² @Temperature 73.4 °F	ISO 179
Charpy Impact, Notched	0.200 J/cm ² @Temperature -30.0 °C	0.952 ft-lb/in ² @Temperature -22.0 °F	ISO 179
	1.00 J/cm ² @Temperature 23.0 °C	4.76 ft-lb/in ² @Temperature 73.4 °F	ISO 179

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+13 ohm-cm	1.00e+13 ohm-cm	IEC 60093
Surface Resistance	1.00e+15 ohm	1.00e+15 ohm	IEC 60093
Dielectric Constant	2.8 @Frequency 1e+6 Hz	2.8 @Frequency 1e+6 Hz	IEC 60250
	2.9 @Frequency 100 Hz	2.9 @Frequency 100 Hz	IEC 60250
Dielectric Strength	34.0 kV/mm	864 kV/in	K20/P50; IEC 60243-1

Dissipation Factor	0.014 @Frequency 1e+6 Hz	0.014 @Frequency 1e+6 Hz	IEC 60250
	0.016 @Frequency 100 Hz	0.016 @Frequency 100 Hz	IEC 60250

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	80.0 - 110 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature 23.0 - 80.0 $^\circ\text{C}$	44.4 - 61.1 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature 73.4 - 176 $^\circ\text{F}$	ISO 11359-1/-2
Maximum Service Temperature, Air	75.0 $^\circ\text{C}$	167 $^\circ\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	94.0 $^\circ\text{C}$	201 $^\circ\text{F}$	ISO 75
Deflection Temperature at 1.8 MPa (264 psi)	90.0 $^\circ\text{C}$	194 $^\circ\text{F}$	ISO 75
Vicat Softening Point	93.0 $^\circ\text{C}$	199 $^\circ\text{F}$	VST/B/50; ISO 306
	105 $^\circ\text{C}$	221 $^\circ\text{F}$	VST/A/50; ISO 306

Optical Properties	Metric	English	Comments
Refractive Index	1.54	1.54	ISO 489
Transmission, Visible	90 %	90 %	transparent; thickness not quantified

Processing Properties	Metric	English	Comments
Melt Temperature	230 - 260 $^\circ\text{C}$	446 - 500 $^\circ\text{F}$	Injection Molding
Mold Temperature	50.0 - 80.0 $^\circ\text{C}$	122 - 176 $^\circ\text{F}$	Injection Molding

Descriptive Properties	
Color	Transparent
Commercial Status	Europe