

Product Texts

VALOX ENH3500 is an unreinforced, non-chlorinated/brominated flame retardant Polybutylene Terephthalate (PBT) injection moldable grade with excellent chemical resistance. It has a UL94V0@0.80mm flame rating. This is a good candidate for a variety of applications needing a sustainable FR PBT solution.

UL Yellow Card Link [F45329-100208982](https://www.ul.com/yellow-card/F45329-100208982)

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	20	cm ³ /10min	ISO 1133
Temperature	250	°C	-
Load	2.16	kg	-

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	3200	MPa	ISO 527
Yield stress	39	MPa	ISO 527
Yield strain	3	%	ISO 527
Stress at break	38	MPa	ISO 527
Strain at break	8	%	ISO 527
Flexural modulus	2700	MPa	ISO 178
Charpy impact strength, +23°C	N	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, +23°C	6	kJ/m ²	ISO 179/1eA
Izod impact strength, +23°C, 4mm	N	kJ/m ²	ISO 180/1U
Izod impact strength, -30°C, 4mm	N	kJ/m ²	ISO 180/1U
Izod notched impact strength, +23°C, 4mm	5	kJ/m ²	ISO 180/1A
Izod notched impact strength, -30°C, 4mm	5	kJ/m ²	ISO 180/1A
ASTM Data			
Tensile Modulus	3150	MPa	ASTM D 638
Tensile Strength at Yield	44	MPa	ASTM D 638
Tensile Strength at Break	42	MPa	ASTM D 638
Elongation at Yield	3	%	ASTM D 638
Elongation at Break	10	%	ASTM D 638
Flexural Modulus	2750	MPa	ASTM D 790
Izod Impact notched, 1/8 in	40	J/m	ASTM D 256
Izod Impact unnotched, 1/8 in	N	J/m	ASTM D 256

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 1.80 MPa	60	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	160	°C	ISO 75-1/-2
Vicat softening temperature, B	170	°C	ISO 306
Vicat softening temperature, 120°C/h 50N	170	°C	ISO 306
Burning behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	0.8	mm	-
Burning behav. 5V at thickness h	5VB	class	IEC 60695-11-20
Thickness tested	2.0	mm	-
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
Glow Wire Flammability Index (GWFI)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature (GWIT)	700	°C	IEC 60695-2-13
GWIT - thickness tested (2)	2	mm	-
Glow Wire Ignition Temperature (GWIT)	700	°C	IEC 60695-2-13
GWIT - thickness tested (3)	3	mm	-
ASTM Data			
DTUL @ 66 psi	160	°C	ASTM D 648
DTUL @ 264 psi	60	°C	ASTM D 648
Vicat Temperature	170	°C	ASTM D 1525

Electrical properties	Value	Unit	Test Standard
ISO Data			
Volume resistivity	>1E13	Ohm*m	IEC 62631-3-1
Surface resistivity	>1E15	Ohm	IEC 62631-3-2
Comparative tracking index	600	-	IEC 60112
ASTM Data			
Volume Resistivity	1E15	Ohm*cm	ASTM D 257
Other properties			
Water absorption	0.35	%	Sim. to ISO 62
Humidity absorption	0.08	%	Sim. to ISO 62
Density	1310	kg/m ³	ISO 1183
Water Absorption, 24hr	0.08	%	ASTM D 570
Density	1310	kg/m ³	ASTM D 792
Processing Recommendation Injection Molding			
Pre-drying - Temperature	110 - 120	°C	-
Pre-drying - Time	2 - 4	h	-
Processing humidity	≤0.02	%	-
Melt temperature	245 - 260	°C	-
Mold temperature	40 - 100	°C	-
Feed temperature	40 - 60	°C	-
Zone 1	230 - 240	°C	-
Zone 2	235 - 250	°C	-
Zone 3	240 - 260	°C	-

Characteristics**Processing**

Injection Molding

Additives

Flame retarding agent

Special Characteristics

Flame retardant

Chemical Resistance

General Chemical Resistance

Regional Availability

Europe