

Covestro

PC

1803

Product information

Manufacturer	Covestro AG
Color	TP
Material Shape	Pellets
Process	Injection molding
Viscosity	High viscosity
FR	HB
Material Attribute	UV resistance grade
Features	Transparency

Application Auto headlamp shadeAutomotive applicationsAutomotive backlightsConnector pieces for halogen systemIndicator lightsLampshadeLighting Applications

Additives UV Stabilizer

Electrical properties	Condition	Standard	Value	Unit
CTI	Solution A	IEC 60112	450	V
CTI	M Solution B	IEC 60112	100	V
Dielectric	Strength 1.0mm	IEC 60243	35	KV/mm
Dielectric	Constant 100Hz	IEC 60250	2.9	
Dielectric	Constant 1MHz	IEC 60250	2.8	
Dissipation	Factor 100Hz	IEC 60250	0.001	
Dissipation	Factor 1MHz	IEC 60250	0.008	
Electrolytic	Corrosion	IEC 60426	A1	Rating
Surface	Resistivity	IEC 60093	1E+16	Ω
Volume	Resistivity	IEC 60093	1E+15	Ω.m

Flammability	Condition	Standard	Value	Unit
Flame	Rating All Color 1.5mm	UL94	HB	
Flame	Rating All Color 3.0mm	UL94	HB	
GWFI		IEC 60695	850	°C
Limiting	Oxygen Index Method A	ISO 4589	25	%

Hardness	Condition	Standard	Value	Unit
Ball	Indentation Hardness	ISO 2039	121	N/mm ²
Mechanical behavior	Condition	Standard	Value	Unit
Charpy	Un-notch Impact 23°C	ISO 179	NB	kJ/m ²
Charpy	Un-notch Impact -30°C	ISO 179	NB	kJ/m ²
Elongation	Yield 50mm/min	ISO 527	6.8	%
Elongation	Break 50mm/min	ISO 527	50	%
Flexural	Strength 2.0mm/min	ISO 178	106	MPa
Flexural	Modulus 2.0mm/min	ISO 178	2400	MPa

Tensile	Modulus	1.0mm/min	ISO 527	2350	MPa
Tensile	Strength	Yield 50mm/min	ISO 527	72	MPa
Optical performance	Condition		Standard	Value	Unit
Refractive	Index		ISO 489	1.573	
Transmittance	1000.00μm		ISO 13468	89	%
Physical property	Condition		Standard	Value	Unit
Density			ISO 1183	1150	kg/m³
Melt	Index	330°C 2.16kg	ISO 1133	10	cm³/10min
Melt	Index	330°C 2.16kg	ISO 1133	10	g/10min
Shrinkage	Flow	60x60x2mm	ISO 294	0.85	%
Shrinkage	xFlow	60x60x2mm	ISO 294	0.85	%
Water	Absorption In Water	23°C Saturation	ISO 62	0.3	%
Water	Absorption Equilibrium	23°C 50RH	ISO 62	0.12	%
Thermal	Condition		Standard	Value	Unit
CLE	Flow	23~55°C	ISO 11359	6.5E-5	m/m/K
CLE	xFlow	23~55°C	ISO 11359	6.5E-5	m/m/K
HDT		1.8MPa	ISO 75	158	°C
HDT		0.45MPa	ISO 75	174	°C
Vicat	Softening Temperature	120°C/hr 50N	ISO 306	184	°C
UL	Condition		Standard	Value	Unit
Arc	Resistance		ASTM D495	5	PLC
Comparative	Tracking Index		IEC 60112	1	PLC
Dimensional	Stability		UL746	0.0	%
HAI	ALL	1.5mm	UL 746A	4	PLC
HAI	ALL	3.0mm	UL 746A	4	PLC
HVTR			UL 746A	2	PLC
HWI	ALL	1.5mm	UL 746A	2	PLC
HWI	ALL	3.0mm	UL 746A	2	PLC
Outdoor	Suitability		UL-746C	f1	
RTI	Elec	ALL 1.0mm	UL 746B	150	°C
RTI	Elec	ALL 1.5mm	UL 746B	150	°C
RTI	Elec	ALL 3.0mm	UL 746B	150	°C
RTI	Imp	ALL 1.5mm	UL 746B	130	°C
RTI	Imp	ALL 3.0mm	UL 746B	130	°C
RTI	Str	ALL 1.5mm	UL 746B	150	°C
RTI	Str	ALL 3.0mm	UL 746B	150	°C
UL	FlameRating	ALL 1.5mm	UL94	HB	
UL	FlameRating	ALL 3.0mm	UL94	HB	