

PC Retardant Masterbatch MB-PC10C

1. Materials

Base polymer: Makrolon® 2805

Flame retardant masterbatch: Inovia MB-PC10C (containing 10% DR-S15)

2. Processing

Drying: 120 °C, 4 hours

Extrusion temperature: 240~250°C

Injection/casting temperature: 245~255 °C

3. Application data of injection mold

Table 3.1 Flame retardant performance

	Dosage of MB-PC10C	UL 94 Rating
FR PC injection mold	30~45%	V0 @ 0.8/1.6 mm

Table 3.2 Thermal performance

	Method	Unit	PC	+30% MB-PC10C
VST(10 N)	ISO 306	°C	143.6	132.6
HDT(1.8 MPa)	ISO 75	°C	118.9	101.3
Tg	/	°C	145.2	134.9

Table 3.3 Processing flowability

	Method	Unit	PC	+30% MB-PC10C
MI (300°C*1.2kg)	ISO 1133	g/10min	16.17	58.82

4. Application data of films

Table 4.1 Flame retardant performance

	Dosage of MB-PC10C	UL 94 Rating
FR PC film	30~45%	V0 @ 0.5 mm

Table 4.2 Optical properties

PC sample	Thickness	Haze	YI	Transmittance
PC 2805	0.5mm	0.40	0.69	88.0%
+30% MB-PC10C	0.5mm	0.44	0.94	87.3%

Table 4.3 Mechanical properties

Material Science	Direction	Thickness	Width	Tensile Speed	Tensile strength	Elongation at break	Bending resistance
PC 2805	MD	0.5mm	10mm	50mm/min	58.81 MPa	141.93%	Manually bend 180° 3 times without breaking
	TD	0.5mm	10mm	50mm/min	52.98 MPa	140.77%	
+30% MB-PC10C	MD	0.5mm	10mm	50mm/min	52.10 MPa	125.10%	Manually bend 180° 3 times without breaking
	TD	0.5mm	10mm	50mm/min	51.06 MPa	41.84%	