

PC Retardant MB-M565

MB-M565 is a new flame retardant masterbatch developed for polycarbonate(PC) compounding products. MB-M565 does not contain any halogen, nor requires adding anti drip agents PTFE. Therefore, it is completely PFAS-FREE. When used with toughening agents, it can achieve UL94-V0 for PC products at a thickness of 1.6mm without affecting its impact strength. Inovia provides a perfect solution for PFAS FREE PC flame retardant.

1. Materials:

PC : Makrolon® 2805

Flame retardant MB: Inovia MB-M565(30% Inovia FR DR-M565)

Toughening agent: Mitsubishi S-2030

2. Processing conditions:

2.1 Drying: PC: 120°C, 4hrs (Moisture content < 0.02%); FR masterbatch is dried under vacuum at 80°C for 4 hours

2.2 Mixing method: Use a blender to mix PC 2805/MB-M565/S2030

2.3 Extrusion temperature: 250~260 °C

3. Application examples data

Table 1. Flame retardant performance

PC 2805	MB-M565	S2030	UL 94 Rating
61.39%	35.19%	3.42%	1.6mm V0

Table 2. Mechanical Properties

	Testing standards	unit	PC	Flame retardant PC
Tensile Strength at Yield	ISO 527	MPa	64	59
Elongation at break	ISO 527	%	52	27
Flexural Stress	ISO 178	MPa	89	83
Flexural Modulus	ISO 178	MPa	2400	2400
Charpy Notched Impact Strength	ISO 179-1ea	KJ/m ²	68	67

Table 3. Thermal performance:

	Testing standards	unit	PC	Flame retardant PC
VST(10N)	ISO 306	°C	144	118
HDT(1.8MPa)	ISO 75	°C	119	90
Tg		°C	145	107

Table 4. Processing Flowability

	Testing standards	unit	PC	Flame retardant PC
Melt index (300°C, 1.2kg)	ISO 1133	g/10min	12	28