

MAKROFLAM is a trade name for **flame retarded composite materials** based on PP, PE, EVA, ABS, HIPS. The reduced flammability effect is achieved either by adding classical (i.e. halogenated) or halogen free flame retardants.

For electrotechnical applications there are included grades having glow wire test value of 960 °C (EN 60695-2-12) and vertical flame test according to UL94 (EN 60695-11-10).

For civil engineering sector there are available composites which comply with requirements according to EN 50086-1, EN 13501-1 and B1 or B2 according to DIN 4102-1.

MAKROFLAM FR is a trade name for flame retarded masterbatches for fibers, geotextiles, films and stadium seats.

AVAILABLE GRADES

	Trade mark		Burning characteristics		
			UL-94	Glow wire test	EN 50086-1
PP Composites, classical retardation:	MAKROFLAM PH 26T20	extrusion	V-0	960 °C	-
	MAKROFLAM PH 56T20	injection mold.	V-0	960 °C	-
	MAKROFLAM PH 76T20	injection mold.	V-0	960 °C	-
Basic Polymer Grades, classical retardation:	MAKROFLAM PH 26/V0	extrusion of PP	V-0	960 °C	-
	MAKROFLAM PH 56/V2	injection mold. of PP	V-2	960 °C	-
	MAKROFLAM EH 46/V2	injection mold. of PE	V-2	850 °C	-
	MAKROFLAM ABS	injection mold.	V-0	960 °C	-
	MAKROFLAM HIPS	injection mold.	V-0	960 °C	-
Halogen Free Grades (HFFR):	MAKROFLAM PZ 66Y60	injection mold.	V-0	960 °C	-
	MAKROFLAM PH15Y30	extrusion	V-0	960 °C	yes
	MAKROFLAM PZ15Y65	extrusion	V-0	960 °C	yes
Masterbatches FR for fibers, geotextiles and films	MAKROFLAM FR 7019	halogen free	B1, B2 (DIN 4102-1), DIN 75200, FMVSS 302, ISO 3795, UL 94/V2		
	MAKROFLAM FR-PIB 37265				
FR masterbatch	MAKROFLAM FR-148		UL 94/V2, V0		
Masterbatches FR for stadium seats	MAKROFLAM FR-102		B1, B2 (DIN 4102-1), UL 94/ V2		
	MAKROFLAM FR-103UV	injection mold.			

The values of mechanical, thermal and processing parameters are given in individual Material Data Sheets.

The above listed grades can also be offered as UV stabilized and/or colored grades.