

Lifoflex FLAM – series 600 and 700 Flame retardant TPE, free of halogens



Lifoflex FLAM series 600

Flame retardant TPE, free of halogens, fulfils the specification of UL 94 V0 with 3 mm wall thickness. Easy processing by injection molding and extrusion.

Lifoflex FLAM series 700

Series Lifoflex UV FLAM 700 fulfils highest specifications of flame retardant materials and can be used for railroad applications. A profile, tested along DIN 5510-2:2009-05 (fire precaution tests for rolling stock), received the following classifications: flammability S3, drip formation ST2, smoke formation SR2. The DIN EN ISO 5659-2 fume toxicity test yielded an FED classification of 0.14 (max. permissible: ≤ 1) for the tested material (tzul = 30 min).

Properties and applications for Lifoflex FLAM – series 600 and 700

Properties:

- Shore hardness: 40 – 90 Shore A
- fulfils the specification UL 94 V0 3,0mm (series 600)
- fulfils the specification UL 94 V0 1,6mm (series 700)
- easy processing in extrusion and injection molding
- good adhesion to PP/PE
- good mechanical properties
- low compression set
- temperature range from -30°C to 100°C
- high flexibility
- physiologically harmless
- low smoke gas toxicity
- possibility of combination with antistatic or electrical conductivity
- possibility of good adhesion to different thermoplastics
- in conformity with European directives 2002/95/EC (RoHS) and 2003/11/EC

Applications:

- injection molding/ extrusion applications for these industries:
 - electric (e.g. cable, cable grommet)
 - building (e.g. cavity wall socket)
 - railroad (e.g. miscellaneous gasket profiles)



Lifoflex FLAM series 600

		Trade name	Lifoflex	Lifoflex	Lifoflex	Lifoflex	Lifoflex	Lifoflex
		Grade	UV FLAM 40600	UV FLAM 50600	UV FLAM 60600	UV FLAM 70600	UV FLAM 80600	UV FLAM 90600
Property	Method	Unit						
Hardness	DIN 53505 - A	Shore A (3 s)	40	50	60	70	80	90
Density	DIN EN ISO 1183-1 (A)	g/cm ³	1,05	1,05	1,03	1,03	1,03	1,03
Tensile strength ¹	DIN 53504	MPa	2,7	3,9	5,5	6,6	7,5	9
Elongation at break ¹	DIN 53504	%	650	740	835	835	770	725
Compression set (23°C / 72 h)	DIN ISO 815	%	24	19	21	29	37	46
Compression set (70°C / 22 h)	DIN ISO 815	%	54	51	49	55	63	72
Flammability rating	UL 94 3,0mm		V0	V0	V0	V0	V0	V0
Glowing wire test	IEC 60695-2-11							
3,0mm; 650°C			passed	passed	passed	passed	passed	passed
3,0mm; 850°C			passed	passed	passed	passed	passed	passed

¹ across the mold direction

Lifoflex FLAM series 700

		Trade name	Lifoflex	Lifoflex	Lifoflex	Lifoflex	Lifoflex	Lifoflex
		Grade	UV FLAM 40700	UV FLAM 50700	UV FLAM 60700	UV FLAM 70700	UV FLAM 80700	UV FLAM 90700
Property	Method	Unit						
Hardness	DIN 53505 - A	Shore A (3 s)	40	50	60	70	80	90
Density	DIN EN ISO 1183-1 (A)	g/cm ³	1,10	1,10	1,07	1,07	1,06	1,05
Tensile strength ¹	DIN 53504	MPa	1,4	2,2	3,6	4,2	5,3	6,4
Elongation at break ¹	DIN 53504	%	460	525	700	730	680	625
Compression set (23°C / 72 h)	DIN ISO 815	%	12	13	16	19	31	42
Compression set (70°C / 22 h)	DIN ISO 815	%	39	39	36	40	48	58
Flammability rating	UL 94 1,6mm		V0	V0	V0	V0	V0	V0
Glowing wire test	IEC 60695-2-11							
1,6mm; 650°C			passed	passed	passed	passed	passed	passed
1,6mm; 850°C			passed	passed	passed	passed	passed	passed
Fire precaution tests for rolling stock	DIN 5510-2:2009-05							
	(500x10x6)mm							
	Flammability		*)	*)	*)	S3	*)	*)
	Drip formation		*)	*)	*)	ST2	*)	*)
	Smoke formation		*)	*)	*)	SR2	*)	*)

¹ across the mold direction

*) Same flammability, drip formation and smoke formation possible like Lifoflex UV FLAM 70700 (must be tested at the product)

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