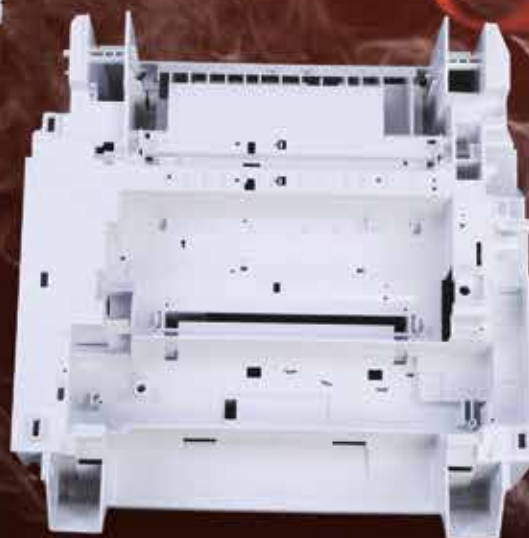




Colour Image Plastic Compound Sdn Bhd (Co.No. 527104-T)



Plastic Technologies Enlighten Life



Flame Retardant Compounds

阻燃级改性塑料

FRblend® is our company line of flame retardant thermoplastic compounds with different UL (Underwriter Laboratory, U.S.A) flammability ratings such as V-0, V-1, V-2, 5V and 5VA. Apart from the flammability properties, our technical engineers also combine other properties such as electrically conductive, wear resistant, structural reinforced and aesthetic pre-colouring into FRblend® compound to meet stringent customers' product design requirement.

FRblend®是本公司一系列的阻燃改性材料，大部分FRblend®的等级已通过美国UL认证的V-0,V1,V2,5V和5VA的防火标准。除了阻燃物性的考虑，本公司的技术人员把FRblend®的阻燃功能和其他功能结合起来，如导电、耐磨损、结构增强和染色性能以满足客户严格的产品设计。

特点：阻燃，耐热，符合RoHS环保指令，UL黄卡认证，加工性佳。

应用：家电外壳，装饰灯壳，线缆套管，电插座，开关制背壳，交流接触器，连接器。



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FRBLEND® Unfilled, Glass Filled & Mineral Filled Series

	TYPICAL PROPERTIES	ASTM TEST METHOD	UNITS	PP-1303	PP-1313	PP-1308	PP-1314	PP-1306	PP-1309	PP-1305	PP-1501	PP-1505	PP-1503	PP-2301	PP-1319
	Feature (特性)			Halogenated	Halogen free	Halogenated	Halogenated	Halogenated	Halogenated	Halogenated	Halogenated	Halogenated	Halogenated	Halogen free	Halogenated
	Filler			Unfilled	Unfilled	Talc filled	Talc filled	Talc filled	Glass & Mica	Glass & Mica	Unfilled	Talc filled	Talc filled	Unfilled	Talc filled
	Filler Content(灰份)			NA	NA	15%	20%	30%	15%+25%	25%+15%	NA	10%	15%	NA	15%
	MECHANICAL / 机械性能														
1	Tensile Strength / 拉伸强度	D638	MPa	26	27	28	26	25	55.2	65	23	27	26	24	19
2	Elongation at break / 断裂伸长率	D638	%	38	25	8	15	14	1.5	2.5	3	60	59	36	3.5
3	Flexural Strength / 弯曲强度	D790	MPa	41	45	48	42	41	88	100	30	36	36	40	33
4	Flexural Modulus / 弯曲模数	D790	MPa	1275	1628	2220	2500	2625	7940	7400	865	1117	1120	1499	1416
5	Notched Izod Impact Strength @ 23°C, 3.2mm Thickness 缺口冲击强度	D256	J/m	28	30	34	26	40	60	90	627	40	43	30	26
	PHYSICAL / 物理性能														
1	Specific Gravity / 比重	D792	g/cm3	1.16	1.02	1.28	1.30	1.40	1.63	1.54	0.95	1.05	1.05	1.02	1.26
2	Melt Flow Index / 熔融指数	D1238	g/10min	21	9.5	9	20	16	2	4	5	29	28	9	19
3	Mold Shrinkage* / 成型收缩率	D955	%	1.2-1.4	0.8-1.1	1.1-1.3	1.0-1.7	0.6-1.0	0.3-0.5	0.2-0.4	1.2-1.4	1.1-1.3	0.6-1.0	0.8 - 1.10	1.1 - 1.5
	THERMAL / 热性能														
1	Heat Deflection Temp@0.45 Mpa (66psi)	D648	°C	114	130	128	120	120	NA	NA	88	102	103	120	102
2	Heat Deflection Temp@1.82 Mpa (264psi) 热变形温度	D648	°C	NA	NA	NA	NA	NA	140	150	NA	NA	NA	NA	NA
3	Flammability UL 94 @ 1.6mm / 燃烧性能	UL 94	-	V-0	V-0	V-0	V-0	V-0	V-0	V-0	V-2	V-2	V-2	V-0	V-0
	SUGGESTED PROCESSING PARAMETERS 建议操作参数														
1	Drying Temperature / 干燥温度		°C	80	80	80	80	80	80	80	80	80	80	80	80
2	Drying Time / 干燥时间		Hours	2	2	2	2	2	2	2	2	2	2	2	2
3	Processing (Melt) Temperature / 操作温度		°C	190-210	190-210	190-210	190-210	190-210	190-220	190-220	190-200	190-210	190-210	190-220	190-220
4	Mold Temperature / 模温		°C	30-60	30-60	30-60	30-60	30-60	30-60	30-60	30-60	30-60	30-60	60-80	60-80

Applications:

FRBLEND® compounds are used mainly in electrical circuit breaker, sockets, bobbin, switches back plate etc.

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Plant 2 : Lot 557 (GM 340), Mukim Hulu Semenyih, Daerah Hulu Langat, Selangor Darul Ehsan, Malaysia.

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FRBLEND® Unfilled, Glass Filled & Mineral Filled Series

	TYPICAL PROPERTIES	ASTM TEST METHOD	UNITS	PS-1302	PS-1313	PS-1311(R)	PS-1312(R)	ABS-1301	PBT-1303	PBT-1306	PBT-1309	PBT-1301	PBT-1307	PBT-1500	PBT-2500
	Feature (特性)			Halogenated	Halogenated	Halogenated	Halogenated	Halogenated	Halogenated	Halogen free	Halogenated	Halogenated	Halogen free	Halogenated	Halogen free
	Filler			Unfilled	Unfilled	Unfilled	Unfilled	Unfilled	Unfilled	Unfilled	Glass fiber	Glass fiber	Glass fiber	Unfilled	Unfilled
	Filler Content(灰份)			NA	NA	NA	NA	NA	NA	NA	15%	30%	30%	NA	NA
	MECHANICAL / 机械性能														
1	Tensile Strength / 拉伸强度	D638	MPa	25	25	20	22	40	62	60	110	116	100	55	53
2	Elongation at break / 断裂伸长率	D638	%	50	46	45	40	14	8	10	1.5	2.5	2	18	18
3	Flexural Strength / 弯曲强度	D790	MPa	39	34	39	39	62	103	80	180	181	122	85	85
4	Flexural Modulus / 弯曲模数	D790	MPa	2400	2100	2250	2250	2256	2965	2860	10793	8380	8600	2414	2632
5	Notched Izod Impact Strength @ 23°C, 3.2mm Thickness 缺口冲击强度	D256	J/m	100	76	60	55	174	32	40	86	132	80	35	37
	PHYSICAL / 物理性能														
1	Specific Gravity / 比重	D792	g/cm3	1.15	1.15	1.18	1.18	1.27	1.43	1.32	1.55	1.63	1.51	1.35	1.33
2	Melt Flow Index / 熔融指数	D1238	g/10min	15	8	7	6	NA	NA	NA	NA	NA	NA	NA	NA
3	Mold Shrinkage* / 成型收缩率	D955	%	0.4-0.7	0.4-0.7	0.4-0.7	0.4-0.7	0.4-0.6	1.8-2.4	1.5-2.0	0.1-0.2	0.3-0.5	0.3-0.5	1.2-1.7	1.2-1.7
	THERMAL / 热性能														
1	Heat Deflection Temp@0.45 MPa (66psi)	D648	°C	NA	NA	83	83	NA	160	NA	NA	NA	NA	NA	NA
2	Heat Deflection Temp@1.82 MPa (264psi) 热变形温度	D648	°C	75	85	72	75	80	71	90	202	210	213	64.3	72
3	Flammability UL 94 @ 1.6mm / 燃烧性能	UL94	-	V-0	V-0	V-0 (3mm)	V-0 (3mm)	V-0	V-0	V-0	V-0	V-0	V-0	V-2	V-2
4	Co-efficient of Linear Thermal Expansion	D696	-	NA	NA	NA	NA	NA	9	9	3	3	3	3	9
	SUGGESTED PROCESSING PARAMETERS 建议操作参数														
1	Drying Temperature / 干燥温度		°C	80	80	80	80	80	100	100	100	100	100	100	100
2	Drying Time / 干燥时间		Hours	2	2	2	2	4	4	4	4	4	4	4	4
3	Processing (Melt) Temperature / 操作温度		°C	180-200	180-200	180-200	180-200	200-230	250-300	250-300	250-300	250-300	250-300	250-300	250-300
4	Mold Temperature / 模温		°C	60-80	40-60	60-80	60-80	60-80	80-120	80-120	80-120	80-120	80-120	80-120	80-120v

Applications:

FRBLEND® compounds are used mainly in electrical circuit breaker, sockets, bobbin, switches back plate etc.

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FRBLEND® Unfilled, Glass Filled & Mineral Filled Series

	TYPICAL PROPERTIES	ASTM TEST METHOD	UNITS	PBT-1310(R)	PA6-1303	PA6-1302	PA6-1301	PA6-2301	PA66-1301	PC-1301	PC-1304	PC-1305	PC-1306	PC-1303	PC-1309
	Feature (特性)			Halogenated	Halogenated	Halogenated	Halogenated	Halogen free	Halogenated	Halogenated	Halogenated	Halogenated	Halogenated	Halogenated	Halogenated
	Filler			Glass fiber	Unfilled	Glass fiber	Mica & Glass	Glass fiber	Glass fiber	Unfilled	Unfilled	UV Stabilized	Unfilled	Glass fiber	Glass fiber
	Filler Content(灰份)			30%	NA	30%	30% + 5%	30%	25%	NA	NA	NA	NA	10%	15%
	MECHANICAL / 机械性能														
1	Tensile Strength / 拉伸强度	D638	MPa	120	69	153	85	110	165	70	60	60	62	66	92
2	Elongation at break / 断裂伸长率	D638	%	2	5	2.6	1.7	3	2.2	16	130	130	103	15	3
3	Flexural Strength / 弯曲强度	D790	MPa	196	110	226	129	120	239	115	95	95	99	105	150
4	Flexural Modulus / 弯曲模数	D790	MPa	9820	3448	9114	7100	6800	8690	2907	2250	2250	2435	3448	4833
5	Notched Izod Impact Strength @ 23°C, 3.2mm Thickness 缺口冲击强度	D256	J/m	95	43	133	87	90	94	180	800	800	684	105	180
	PHYSICAL / 物理性能														
1	Specific Gravity / 比重	D792	g/cm3	1.64	1.36	1.62	1.59	1.43	1.56	1.23	1.21	1.21	1.23	1.27	1.32
2	Melt Flow Index / 熔融指数	D1238	g/10min	NA	NA	NA	21	NA	20	61	12	12	16	NA	10
3	Mold Shrinkage* / 成型收缩率	D955	%	0.5-0.7	1.2-1.8	0.2-0.4	0.5-1.0	0.2-0.4	0.5	0.6-0.9	0.5-0.7	0.5-0.7	0.5-0.7	0.2-0.4	0.3-0.5
	THERMAL / 热性能														
1	Heat Deflection Temp@0.45 MPa (66psi)	D648	°C	NA	210	NA	NA	NA	NA	115	NA	NA	NA	149	NA
2	Heat Deflection Temp@1.82 MPa (264psi) / 热变形温度	D648	°C	215	82	196	196	180	250	103	132	132	120	143	142
3	Flammability UL 94 @ 1.6mm / 燃烧性能 @ 3.0mm / 燃烧性能	UL 94 UL 94	- -	V-0 NA	V-0 NA	V-0 NA	V-0 NA	V-0 NA	V-0 NA	V-0 NA	V-2 V-0	V-2 V-0	V-0 NA	V-0 NA	V-0 NA
4	Co-efficient of Linear Thermal Expansion	D696	-	3	9	2	5.5	2	2	6.5	6	6	6	4	4
	SUGGESTED PROCESSING PARAMETERS 建议操作参数														
1	Drying Temperature / 干燥温度		°C	100	100	100	100	100	100	100	100	100	100	100	100
2	Drying Time / 干燥时间		Hours	4	4	4	4	4	4	4	4	4	4	4	4
3	Processing (Melt) Temperature / 操作温度		°C	250-300	240-270	240-270	240-270	240-270	250-270	250-270	250-270	250-270	250-270	250-270	250-270
4	Mold Temperature / 模温		°C	80-120	80-100	80-100	80-100	80-100	80-100	80-120	80-120	80-120	80-120	80-120	80-120

Applications:

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