



PRODUCT

Expandable Graphite GREP-EG

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COMPOSITION

Special treated expandable graphite controlled expansion until 230°C

ADVANTAGES

- High efficiency non-halogen flame retardant for several resins.
- High flame retardancy is achieved with lower loading level.
- Minimize deterioration of physical properties.
- Minimize smoke emission during burning.

PROPERTIES

Appearance	Black Powder
Moisture	≤ 0.3%
Expansion ratio	180 ~ 230cc/g (1,000°C)
pH	6.0 ~ 9.0
Particle Size	300 ~ 400 μm

Particle size distribution

+24 mesh	0.5%
+32 mesh	3.0%
+48 mesh	63.5%
+60 mesh	13.0%
+80 mesh	10.0%
-80 mesh	10.0%



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STATE OF EXPANSION



Not-Expand and Expanded



Expanding of GREP-EG

APPLICATION

Thermoplastics

PACKAGE

20kg net paper bag

FORMULATION

- Knead at milder condition to prevent collapse of particle.
Once collapsed, deteriorate flame retardancy.
- Perform powerful ventilation at vent of extruder.
- Do not use mesh at head of extruder.



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THERMOPLASTICS FORMULATION COMBINED WITH RED PHOSPHOROUS

	PP				HIPS		LDPE		ABS	
Resin	100	100	100	100	100	100	100	100	100	100
GREP-EG		8	10	10		8		10		10
Red-P (Powder)		4	5	5		4		5		5
Mg(OH) ₂				25	1					
Oxygen Index	19.0	26.0	27.0	31.5	18.5	29.5	18.5	28.0	18.5	30.5
UL94 3.0mm	HB	V0	V0	V0	HB	V0	HB	V0	HB	V0
UL94 1.5mm	HB	V2	V0	V0	HB	V0	HB	V0	HB	V0

THERMOPLASTICS FORMULATION COMBINED WITH AMMONIUMPOLYPHOSPHATE

(FCP-770 → complex of surface treated ammonium polyphosphate and nitrogen flame retardant)

	PP		HIPS		LDPE		ABS	
Resin	100	100	100	100	100	100	100	100
GREP-EG	15	15	20	25	15	25	20	25
FCP-770	20	25	15	20	10	25	15	20
Oxygen Index	28.0	30.0	27.0	28.0	28.0	28.5	27.0	31.0
UL94 3.0mm	V0	V0	V0	V0	V0	V0	V2	V0
UL94 1.5mm	V2	V0	V2	V0	HB	V0	V2	V0

EPDM FORMULATION

EPDM	342	342	342	342
Curing Agent	4.3	4.3	4.3	4.3
GREP-EG	25	33.3	16.7	40
Red-P (Powder)	25	16.7	33.3	10
UL94 1.0mm	V0	V0	V0	V2