

Expandable Graphite Flame Retardant Additives

NYACOL® NYAGRAPH

Nyacol's NYAGRAPH Expandable Graphite flame retardant additives are formulated to provide a system that offers the following advantages:

- Halogen-free
- Low smoke
- Reduced heat release
- Insulating
- Lower in toxic gases
- Non-dripping

NYAGRAPH Expandable Graphite is a natural material based on the processing of graphite ore.

The ore is treated with sulfuric acid in what is called an intercalation process. The material is washed and neutralized to prevent corrosion of metal parts when processed by the user. Excessive shear should be avoided.

NYAGRAPH additives may be used in polyurethanes, sealants, bitumens, rubbers, adhesives, coatings, and polymers.

NYAGRAPH additives may also be used in conjunction with other flame-retardant additives to provide improved flame-retardant properties to a material.

INFLUENCE ON LOI IN EPDM

EPDM:	LOI 22.7
EPDM + 20% Brominated FR:	LOI 27.5
EPDM + 20% NYAGRAPH 251:	LOI 31.5
EPDM + 10% NYAGRAPH 251 + 10% Br FR:	LOI 35.0

TYPICAL PROPERTIES

BULK DENSITY: +/- 0.6 g/cm ³	pH: 6-7	IMPURITIES: Trace of silica and/or mica
SPECIFIC GRAVITY: 2.2 g/cm ³	FREE WATER: <1%	PARTICLE SIZE: 80% >300 microns
WATER SOLUBLE MATERIAL: <0.1%	FREE ACID: 0.1 mg/g KOH	COLOR: Black with metallic sheen

PRODUCT SELECTION

GRADE	PURITY	INITIAL EXPANSION TEMPERATURE	EXPANSION VOLUME	DESCRIPTION
FP	>95%	200°C	180 ml/g	Polyurethane applications. Minimal influences on catalyst.
35	>98%	200°C	35-50 ml/g	Very fine particle size: 80% < 150 micron.
200	>98%	200°C	>180 ml/g	Soft ash, plastic applications. Fine particle, 80% >180 microns.
249	>95%	200°C	>250 ml/g	Standard product for polyurethane, sealants, bitumens.
250	>98%	200°C	>250 ml/g	Soft ash, plastic applications when used with other flame retardants.
251	>99%	200°C	>250 ml/g	Soft ash, low abrasion, low corrosion. Polymer applications.
KP251	>99%	150°C	>250 ml/g	Soft ash, low initial expansion temperature, low sulfur.
351	>99%	150°C	>350 ml/g	Soft ash, high expansion.

FOR ADDITIONAL INFORMATION OR TO PLACE AN ORDER

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