

Nonaqueous Dispersion of Colloidal Antimony Pentoxide

NYACOL[®] APE3040

SUMMARY

NYACOL[®] APE3040 is patented colloidal antimony pentoxide dispersion formulated for use as a flame retardant synergist in halogen-containing vinyl ester and unsaturated polyester resins. APE3040 may be used with cobalt-MEKP type cure systems processed at room temperature. APE3040 can replace antimony trioxide in formulas containing bromine or chlorine.

APE3040 ADVANTAGES

- Eliminates gel time drift.
- Offers translucency in the final composite.
- Does not settle.
- Reduces the level of cobalt required.
- Provides better penetration and infusion into the substrate.
- Reduces wear on pumps, valves and nozzles.
- Reduces health, safety and environmental issues caused by concerns with powdered antimony trioxide dust.

TYPICAL ANALYSIS

COMPONENT	PERCENT BY WEIGHT
Total antimony expressed as antimony pentoxide (Sb ₂ O ₅):	40
Unsaturated polyester resin:	15
Isophthalic polyester resin:	40
Amines, C ₁₂ -C ₁₄ -tert-alkyl, ethoxylated:	5

PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Gray / tan viscous liquid
Physical state:	Liquid
Boiling point:	>232° C
Flash point:	>101° C
Specific gravity:	1.6
Oxidizing properties:	Not an oxidizer
Solubility in water:	Not soluble
Density:	1600 kg/m ³

APPLICATIONS

APE3040 is typically used at loading levels of 3% to 8% by weight, depending on the actual level of the halogen present in the unsaturated polyester or vinyl ester resin.

Laminates produced from epoxy vinyl ester resins from Ashland Specialty Chemical Company, Composite Polymers Division, from AOC, LLC, from Reichhold, Inc., and from Swancor Ind. Co. Ltd., with the usage levels listed below, have achieved Class I flame ratings.

RESIN	% APE3040	E-84 FLAME SPREAD
Ashland HETRON® FR992Sb	3.00	Class I
Ashland DERAKANE® MOMENTUM® 510C	3.75	Class I
Ashland DERAKANE® 510N	3.75	Class I
AOC VIPEL® KO22-CNC-00	2.5	Class I
AOC VIPEL® KO22-CND-00	2.5	Class I
AOC VIPEL® KO22-CNP-25	2.5	Class I
AOC VIPEL® KO22-CNT-00	2.5	Class I
Interplastic Corporation CoREZYN® VE8440	3.5	Class I
Interplastic Corporation CoREZYN® VE8480N	7.5	Class I
Reichhold DION® 9300	3.00	Class I
Swancor SWANCOR® 905-2	3.75	Class I
Swancor SWANCOR® 905-N	3.75	Class I
Swancor SWANCOR® 905C	3.75	Class I

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® Registered trademark of AOC, LLC

® Registered trademark of Interplastic Corporation

® Registered trademark of Reichhold, Inc.

® Registered trademark of Swancor Ind. Co., Ltd.

PACKAGING

CONTAINER	CLOSURE	SIZE	WEIGHT NET	WEIGHT GROSS
Plastic pail	Open head	5 gallons	60 pounds	63 pounds
		20 liters	27 kilograms	29 kilograms
Steel drum	Open head	30 gallons	375 pounds	405 pounds
		114 liters	170 kilograms	184 kilograms

FOR ADDITIONAL INFORMATION OR TO PLACE AN ORDER

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