SYNOLAC®

TECHNICAL DATA SHEET

SYNOLAC® E4296

Oil free polyester

PRODUCT APPLICATION DETAILS

SYNOLAC® E4296 is a linear oil free polyester developed for use in Coil Coating, sheet fed Metal Decorating and General Industrial applications.

SALES SPECIFICATIONS

	CHARACTERISTICS	METHODS
Solid content (125°C, %)	59 - 61	ISO 3251
Viscosity (25°C, Gardner)	Z3-Z4	Gardner-Holdt
Color (Gardner)	Max. 3	ASTM D-1544
Acid value (mg KOH/g)	Max. 3	ISO 2114

OTHER CHARACTERISTICS[1]

	CHARACTERISTICS	METHODS
Solvent	Aromatic 100	-
Density (25°C, g/mL)	1.08	-
Hydroxyl content (%)	0.5	-

[1] The data provided for these properties are typical values, intended only as guides, and should not be construed as sales specifications

MARKETS

Coatings & Inks

- Industrial Coating
  - Coil
  - Packaging Coating Metal (Can And Others)

PERFORMANCE BENEFITS

- Excellent Flexibility
- Excellent hardness
- Good gloss
- Good durability

SYNOLAC® E4296

FORMULATION GUIDELINES

RECOMMENDATIONS FOR USE

SYNOLAC® E4296 is compatible with a wide range of melamine resins and is typically used with hexamethoxymethyl melamine and partially methylated melamine. It is also compatible with alkyd, polyester, epoxy and partially in acrylic resin.
SYNOLAC® E4296 with hexamethoxymethyl melamine resin at ratio of 70:30 to 85:15 on solid resin content is suggested.
To promote cure, the use of between 1% and 5% of acid catalyst is recommended, e.g. paratoluene sulphonic acid, calculated on melamine solids.
Variation in levels of SYNOLAC® E4296 and the type of amino resin will modify the overall performance characteristics of the coating. Increasing the level of amino resin (and catalyst) will generally tend to increase the hardness and solvent resistance of the coating but may compromise flexibility.
For coil coating applications an 85:15 to 80:20 ratio, on solids, pTSA catalyst on amino level.
For metal decorating formulations, a recommended blend, on solids, of 72:18:10 OFPE: melamine: epoxy resin (epoxy equ »500) with 2% pTSA solids amino is suitable.
Part methylated amino resin can be used in place of hexamethoxymethyl melamine and will develop very good hardness & solvent resistance but at the expense of flexibility.
Benzoguanamine resin can also be used to increase cure response and retortability.
General industrial enamels can be formulated with 70:30 to 80:20 ratios with hexamethoxymethyl melamine or part methylated melamine, with 2% pTSA catalyst.
This resin can be used in combination with Isocyanates.
Enamels based on SYNOLAC® E4296 exhibit good light fastness results after prolonged UV exposure and finishes are resistant to staining from variety of household materials.

SOLVENTS

Mixtures of high boiling aromatic hydrocarbons, alcohols, glycol ethers esters and ketones are appropriate coating applications, aromatic hydrocarbons for Metal Decorating finishes and aromatic hydrocarbon/alcohol blends for General Industrial enamels.

PRODUCT SAFETY

Please refer to the corresponding Safety Data Sheet.

STORAGE AND HANDLING

SYNOLAC® E4296 should be stored indoors in the original, unopened and undamaged container, in a dry place at a temperature not exceeding 35°C. Exposure to direct sunlight should be avoided.
In the above mentioned storage conditions the shelf life of the resin will be 12 months.

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