

# SYNOLAC<sup>®</sup> E4296

Saturated (Oil Free) Polyester

ARKEMA COATING RESINS

## Product

### Application details

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

### Performance Benefits

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

### Polymer Type

- Solventborne Polyester

### Sales Specifications

Solid Content at 125°C, % (ISO 3251)	59 - 61
Viscosity at 25°C, Gardner Holdt	Z3-Z4
Colour, Gardner scale (ASTM D1544)	3 max
Acid value, mg KOH/g (ISO 2114)	3 max

### Other Characteristics<sup>1</sup>

Volatile	Aromatic 100 / butyl glycol
Density / Specific Gravity at 25°C, g/ml (ISO 2811)	1.08
Hydroxyl Value, mg KOH/g	16.5

Note: Acid value and/or Hydroxyl value quoted relative to solid resin

<sup>1</sup> The data provided for these properties are typical values, intended only as guides, and should not be construed as sales specifications

### RECOMMENDATIONS FOR USE

SYNOLAC<sup>®</sup> 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<sup>®</sup> 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.

### Formulation Guidelines

Variation in levels of SYNOLAC<sup>®</sup> 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.

**SYNOLAC<sup>®</sup>**

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.

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## Product Safety

Please refer to the corresponding Safety Data Sheet.

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## Storage & 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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