

SYNOLAC® 5086

GENERAL INDUSTRY

ARKEMA COATING RESINS

Product Application details

SYNOLAC® 5086 is a low viscosity linear saturated polyester with good compatibility designed for blending with other systems in order to increase solids and reduce volatile organic contents. SYNOLAC® 5086 is a highly versatile resin that can be used in diverse end-uses such as 2-component acrylic isocyanate or polyester isocyanate systems and high quality stoving systems. SYNOLAC® 5086 will react into the blended system via its high hydroxyl content, and will not compromise durability.

Performance Benefits

- Reduce volatile organic content
- Increase solids content
- Improve flexibility and toughness at low temperatures

Polymer Type

- Solventborne Polyester

Sales Specifications

Viscosity at 25°C, mPa.s (ISO 3219)	5500 - 8500
Colour, Hazen scale (ISO 6271)	300 max
Acid value, mg KOH/g (ISO 2114)	7 max

Other Characteristics¹

Density / Specific Gravity at 25°C, g/ml	1.12
Hydroxyl Content, %	5,7 - 6,7
Hydroxyl Value, mg KOH/g	190 - 220
Solid Content, %	100

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

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

RECOMMENDATIONS FOR USE

It is suggested that initial evaluations be carried out using SYNOLAC® 5086 at a substituted level of 20% of the main binder.

(a) 2-component systems

When used in combination with other hydroxyl containing resins in 2-component systems, SYNOLAC® 5086 will react with aromatic isocyanates such as Desmodur® L series (1) and aliphatic isocyanates such as Tolonate™ HDB series (2) and Desmodur® N series (1).

Formulation Guidelines

Recommended ratios using typical isocyanates would be:

The reaction ratio is calculated from the respective equivalent weight or hydroxyl and isocyanate content of the reactants. The relationship is:

$$\text{Hydroxyl equivalent weight} = \frac{17 \times 100}{\% \text{ OH}}$$

$$\text{Isocyanate equivalent weight} = \frac{42 \times 100}{\% \text{ NCO}}$$

Recommended ratios using typical isocyanates would be:

	on solid resin	as supplied
SYNOLAC® 5086	281	281
Desmodur® N 75 series (1)	191	255
Tolonate™ HDB 75 MX (2)	191	255
Desmodur® L 75 (1)	242	323

(b) stoving systems

When used in combination with other resins in stoving systems, SYNOLAC® 5086 will react with most melamine resins, resin solids ratios of between 70:30 and 85:15 binder to amino are suggested.

SOLUBILITY

SYNOLAC® 5086 is completely soluble in aromatic hydrocarbons, esters and ketones and insoluble in aliphatic hydrocarbons.

COMPATIBILITY

SYNOLAC® 5086 is compatible with many resins including polyesters, acrylics, isocyanates, melamine, urea and alkyd resins.

Notes: (1) Bayer MaterialScience, (2) Vencorex Chemicals

Product Safety

Please refer to the corresponding Safety Data Sheet.

Storage & Handling

SYNOLAC® 5086 should be stored indoors in the original, unopened and undamaged container, in a dry place at a temperature not exceeding 30°C. Exposure to direct sunlight should be avoided. In the above mentioned storage conditions the shelf life of the resin will be 6 months from the shipping date

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