# 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 Characteristics[1]

| | |
|---|---|
| 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

## Formulation Guidelines

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).

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:

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

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

SYNOLAC BY ARKEMA

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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