

## TECHNICAL DATA SHEET

# SYNOLAC® 5085

*Polyester polyol*

### PRODUCT APPLICATION DETAILS

SYNOLAC® 5085 is a solvent-free low viscosity linear saturated polyester (typical average molecular weight 1500).

SYNOLAC® 5085 is a very compatible low viscosity modifier designed for blending with other systems.

SYNOLAC® 5085 is suitable for use with 2-component acrylic isocyanate or polyester isocyanate systems, high quality stoving systems.

### SALES SPECIFICATIONS

	CHARACTERISTICS	METHODS
Viscosity (Brookfield, SC4-21/13R, 47 s-1) (25°C)	800 - 1100 mPa.s	ISO 3219
Color	3 max Gardner	ISO 4630
Acid value	3 max mg KOH/g	ISO 2114

### OTHER CHARACTERISTICS<sup>1</sup>

	CHARACTERISTICS	METHODS
Density	1.06 g/ml	-
Hydroxyl content	7.6 %	-
Hydroxyl equivalent weight	250	-
Solids content	100 %	-

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

### MARKETS & APPLICATIONS

#### Coatings & Inks

- Industrial Coating
  - Automotive - OEM
  - Automotive - Refinish
  - General Industry
  - Metal Exterior - Powder
  - Protective Coating
  - Protective And Marine Coating
  - Automotive - Oem - Exterior

### PERFORMANCE BENEFITS

- Increase solids content
- Improve flexibility, even at low temperatures
- Improve wetting of pigments and substrates
- Improve adhesion and saltspray resistance
- Improve chemical resistance

# SYNOLAC® 5085

## FORMULATION GUIDELINES

### RECOMMENDATIONS FOR USE

SYNOLAC® 5085 will react into the blended system via its high hydroxyl content, and will not compromise durability. It is suggested that initial evaluations be carried out using SYNOLAC® 5085 at substituted levels of between 5% and 15% of the main binder.

#### (a) 2-component systems

When used in combination with other hydroxyl containing resins in 2-component systems, SYNOLAC® 5085 will react with aromatic isocyanates such as Desmodur® L series <sup>(1)</sup> and aliphatic isocyanates such as Tolonate™ HDB series <sup>(2)</sup> and Desmodur® N series <sup>(1)</sup>.

SYNOLAC® 5085 can be successfully used (at low levels, 2-3%) in water based systems if it is dispersed into the resin system before neutralisation and addition of water.

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:

Hydroxyl Equivalent Weight =  $(17 \times 100) / \%OH$

Isocyanate Equivalent Weight =  $(42 \times 100) / \%NCO$

#### (b) stoving systems

When used in combination with other resins in stoving systems, SYNOLAC® 5085 will react with most melamine resins, resin solids ratios of between 70:30 and 85:15 binder to amino are suggested.

### SOLUBILITY

SYNOLAC® 5085 is soluble in aromatic hydrocarbons, esters and ketones and insoluble in aliphatic hydrocarbons.

### COMPATIBILITY

SYNOLAC® 5085 is compatible with many resins including polyesters, acrylics, isocyanates, melamine, urea and alkyd resins.

Notes: <sup>(1)</sup> Bayer MaterialScience, <sup>(2)</sup> VENCOR®ex Chemicals

## PRODUCT SAFETY

Please refer to the corresponding Safety Data Sheet.

## STORAGE AND HANDLING

SYNOLAC® 5085 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 from the shipping date.

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