

## TECHNICAL DATA SHEET

# SYNOCURE® 854 BA 80

*Acrylic polyol*

### PRODUCT APPLICATION DETAILS

SYNOCURE® 854 BA 80 is a high solids hydroxy functional acrylic resin designed for curing at room temperature with suitable polyisocyanates.

Suggested applications are protective, marine and maintenance coatings.

### SALES SPECIFICATIONS

	CHARACTERISTICS	METHODS
Solid content (125°C)	78 - 82 %	ISO 3251
Viscosity (25°C)	6000 - 9000 mPa.s	ISO 3219
Color	100 max Hazen	ISO 6271
Acid value	10 max mg KOH/g	ISO 2114

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

	CHARACTERISTICS	METHODS
Solvent	Butyl acetate	-
Flash point	24 °C	ISO 3679
Density	1.04 g/ml	ISO 2811
Hydroxyl content	2.1 %	-
Hydroxyl equivalent weight	810	-

<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

#### Coatings & Inks

- Industrial Coating
  - General Industry
  - Marine
  - Metal Exterior - Powder
  - Protective Coating
  - Protective And Marine Coating
  - Rigid Packaging Metal (Can & Others)

### PERFORMANCE BENEFITS

- Low isocyanate demand
- Economical high solids coatings
- Compliant, low VOC coatings
- Very good gloss retention
- Good all-round performance

# SYNOCURE® 854 BA 80

## FORMULATION GUIDELINES

### RECOMMENDATIONS FOR USE

SYNOCURE® 854 BA 80 should be mixed just prior to application with the selected polyisocyanate. The mixing ratio is not critical although it is preferable to use stoichiometric ratios to obtain optimum performance.

The high solids / low viscosity character of SYNOCURE® 854 BA 80 allows low VOC coatings to be formulated even with conventional polyisocyanates. Depending upon formulation <420g/l at 23 seconds cup 4 and <350g/l at 45 seconds cup 4 are possible.

Slightly lower VOC's can be achieved if a lower viscosity isocyanate trimer such as Tolonate® HDT-LV<sup>(2)</sup> is used.

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\*100) / %OH

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

Using Desmodur® N 75 series<sup>(1)</sup>, Tolonate™ HDB 75 MX or Tolonate® HDT-LV2<sup>(2)</sup>, the recommended ratios would be:

- on solid resins: SYNOCURE® 854 BA 80/Desmodur® N 75 series<sup>(1)</sup>, Tolonate™ HDB 75 MX or Tolonate® HDT-LV2<sup>(2)</sup> = 810/191 or 183

- as supplied: SYNOCURE® 854 BA 80/Desmodur® N 75 series<sup>(1)</sup>, Tolonate™ HDB 75 MX or Tolonate® HDT-LV2<sup>(2)</sup> = 1013/255 or 183

If necessary the initial rate of cure of SYNOCURE® 854 BA 80 based systems can be accelerated by the use of tin catalyst in the form of dibutyl tin dilaurate. Although the level can be varied to suit specific requirements 0.02% of DBTDL based on total solid resin is a good starting point.

### SOLUBILITY

The solvents chosen for paints and lacquers based on SYNOCURE® 854 BA 80 should be free of water and should not contain groups that react with isocyanates. Esters and ketones are true solvents for this type of system and are recommended for use in conjunction with aromatic hydrocarbon diluents such as xylene.

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

## PRODUCT SAFETY

Please refer to the corresponding Safety Data Sheet.

## STORAGE AND HANDLING

SYNOCURE® 854 BA 80 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.

Shelf Life (Months): 12