SYNOCURE®

TECHNICAL DATA SHEET

SYNOCURE® 857 X 60

Acrylic polyol

PRODUCT APPLICATION DETAILS

SYNOCURE® 857 X 60 is a hydroxy functional acrylic resin designed to crosslink at room temperature with polyisocyanates, and is particularly recommended where economy in use is a major factor.

SALES SPECIFICATIONS

	CHARACTERISTICS	METHODS
Solid content (125°C)	58 - 62 %	ISO 3251
Viscosity (25°C)	1000 - 2500 mPa.s	ISO 12058-1
Color	70 max Pt/Co	DIN EN 1557
Acid value	10 max mg KOH/g	ISO 2114

OTHER CHARACTERISTICS[1]

	CHARACTERISTICS	METHODS
Solvent	Xylene	-
Flash point	24 °C	ISO 3679
Density	1.03 g/ml	ISO 2811
Hydroxyl content	1.2 %	-
Hydroxyl equivalent weight	1400	-

[1]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 - Refinish
  - General Industry

PERFORMANCE BENEFITS

- Excellent flexibility
- Exceptionally fast drying
- High gloss
- Low isocyanate requirement
- Good hardening rate

SYNOCURE® 857 X 60

FORMULATION GUIDELINES

RECOMMENDATIONS FOR USE

SYNOCURE® 857 X 60 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 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 [1]
Tolonate™ HDB 75 MX [2], the recommended ratios would be:
- on solid resins: SYNOCURE® 857 X 60/Desmodur® N 75 series [1]
Tolonate™ HDB 75 MX [2] = 1400/191
- as supplied: SYNOCURE® 857 X 60/Desmodur® N 75 series [1]
Tolonate™ HDB 75 MX [2] = 2333/255
SYNOCURE® 857 X 60 reacted with Desmodur® N 75 series [1] or Tolonate™ HDB 75 MX [2] in stoichiometric proportions has a usable pot life at spraying viscosity in excess of a full working day at normal room temperature. The use of catalysts or higher temperatures will reduce this storage period.
To increase the initial rate of cure of SYNOCURE® 857 X 60 paints, at both room temperature and under low bake conditions, the use of tin or zinc catalysts in the form of dibutyl tin dilaurate or zinc octoate is recommended. The levels used will depend on specific requirements, but typical metal contents calculated on total solid resin would be 0.001% tin or 0.0015% zinc.
Paints prepared using stoichiometric blends of SYNOCURE® 857 X 60 and Desmodur® N 75 series [1] or Tolonate™ HDB 75 MX [2] give coatings which are sand dry in 7min - 10 min and hard dry in about 40 min at normal room temperature.

SOLUBILITY

The solvents chosen for paints and lacquers based on SYNOCURE® 857 X 60 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: [1] Bayer MaterialScience, [2]VENCOREX® Chemicals

PRODUCT SAFETY

Please refer to the corresponding Safety Data Sheet.

STORAGE AND HANDLING

SYNOCURE® 857 X 60 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

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