SYNOCURE® 857 X 60

GENERAL INDUSTRY

ARKEMA COATING RESINS

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.

Performance Benefits

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

Polymer Type

- Solventborne Acrylic

Sales Specifications

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

Other Characteristics[1]

Volatile	Xylene
Flash point, °C (ISO 3679)	24
Density / Specific Gravity at 20°C, g/ml (ISO 2811)	1.03
Hydroxyl Content, %	1.2
Hydroxyl Equivalent weight	1400

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

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:

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

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

Using Desmodur® N 75 series (1)
Tolonate™ HDB 75 MX (2), the recommended ratios would be:

	on solid resin	as supplied
SYNOCURE® 857 X 60	1400	2333
Desmodur® N 75 series (1) Tolonate™ HDB 75 MX (2)	191	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 & 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 12 months from the shipping date

Arkema Coating Resins
420, rue d'Estienne d'Orves
92705 Colombes Cedex - France
arkema.com - **arkemacoatingresins.com**