

SYNOCURE® 810X-60

ARKEMA COATING RESINS

Product Application details

SYNOCURE® 810X-60 is a hydroxyl functional acrylic resin developed for use in compliant two component systems when cured with polyisocyanate.

SYNOCURE® 810X-60 is recommended for the formulations, which are cross-link at room temperature or force dried with poly isocyanate and is particularly recommended for general industrial and vehicle refinish applications.

Performance Benefits

- Good hardness
- Excellent gloss and Adhesion
- Good Durability
- Excellent mechanical properties

Polymer Type

- Solvent borne Acrylic

Specifications

Solid Content at 125°C, % (ISO 3251, 1gm, 1h, 125°C) 58 - 62

Viscosity at 25°C, Brookfield Viscometer (ISO 3219) 35 - 55

Colour, Gardner scale (ISO 4630) 1 Max

Acid value, mg KOH/g (ISO 2114) 10 Max

Volatile Xylene

Density / Specific Gravity at 20°C, g/ml (ISO 2811) 1.00

Hydroxyl Content, % 1.80

Other

Characteristics¹

Hydroxyl Equivalent weight 945

Note: Acid value and/or Hydroxyl content 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

RECOMMENDATIONS FOR USE

SYNOCURE® 810X-60 should be mixed with the selected polyisocyanate just prior to application. 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:

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

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

Formulation Guidelines

Using Desmodur N-75(1), the recommended ratios would be:

	on solid resin	as supplied
SYNOCURE® 810X-60	945	1575
Desmodur N- 75 (1)	191	255

SYNOCURE®
BY ARKEMA

To increase the initial rate of cure of SYNOCURE® 810X-60 based paints and varnishes, at both ambient temperatures 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 will depend on the specific requirements but typical metal contents calculated on total solid resin would be 0.001% tin or 0.02% zinc.

The pot life of coatings based upon SYNOCURE® 810X-60 / Desmodur N 75 (1) in the recommended proportions gives a full working days use. Lacquers prepared at 23 seconds flow cup B4 at 30°C will double in viscosity after 30 hours. With a catalyst level of 0.001% tin on total solid resin this will be reduced to 10 hours. The catalyst used is dibutyl tin dilaurate

SOLUBILITY

The solvents chosen for paints and laquers based on SYNOCURE® 810X-60 should be free from water and not contain groups that react with isocyanates.

OTHER ADDITIVES

To optimize the performance of SYNOCURE® 810X-60, when used in a clear varnish formulation, we recommend the use of Tinuvin® 900 (2) and Tinuvin® 292 (2) in a 2:1 ratio.

Notes: (1) Bayer, (2) Ciba

Product Safety

Please refer to the corresponding Safety Data Sheet

Storage & Handling

SYNOCURE® 810X-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 conditions the shelf life of the resin will be 12 months from the date of manufacturing.

August 2019

The statements, technical information and recommendations contained herein are believed to be accurate as of the date hereof. Since the conditions and methods of use of the product and of the information referred to herein are beyond our control, ARKEMA expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information; NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE CONCERNING THE GOODS DESCRIBED OR THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be applicable when such product is used in combination with other materials or in any process. The user should thoroughly test any application before commercialization. Nothing contained herein constitutes a license to practice under any patent and it should not be construed as an inducement to infringe any patent and the user is advised to take appropriate steps to be sure that any proposed use of the product will not result in patent infringement. See SDS for Health & Safety Considerations.

The products described in the document are not Medical grades designated for Medical Device applications. Arkema has implemented an internal Medical Policy regarding the use of Arkema products in Medical Devices applications. Arkema has designated Medical grades to be used for Medical Device applications. Products that have not been designated as Medical grades are not authorized by Arkema for use in Medical Device applications. In addition, except for limited cases as determined by the Medical Device Policy, Arkema strictly prohibits the use of any Arkema products in Medical Device applications that are implanted in the body or in contact with bodily fluids or tissues for greater than 30 days. For any use of Arkema's product in Medical Device applications, please contact Arkema's sales network.

Arkema Chemicals India Pvt Ltd
D43 (1), Trans Thane Creek, MIDC Industrial Area,
Shiravane, Nerul, Navi Mumbai 400706, India
Telephone: +91 22 6737 7100
Fax: +91 22 2768 7998

ARKEMA
INNOVATIVE CHEMISTRY