

SYNOCURE® 864 N 60

PROTECTIVE & MARINE COATINGS

ARKEMA COATING RESINS

Product Application details

SYNOCURE® 864 N 60 is a low hydroxy functional acrylic resin designed to crosslink at room temperature with polyisocyanates, and is particularly recommended where economy in use is a major factor, which is achieved through low isocyanate demand.

SYNOCURE® 864 N 60 has excellent resistance to weathering so is particularly suited to low cost protective coating topcoats

Performance Benefits

- Economy in use
- Excellent exterior durability
- Low isocyanate demand
- Long pot life

Polymer Type

- Solventborne Acrylic

Sales Specifications

Solid Content at 125°C, % (ISO 3251)	58 - 62
Viscosity at 25°C, mPa.s (ISO 12058-1)	1800 - 3000
Colour, Pt/Co Scale (DIN EN 1557)	100 max
Acid value, mg KOH/g (ISO 2114)	10 max

Other Characteristics¹

Volatile	Aromatic hydrocarbon, boiling range 160°C-180°C
Flash point, °C (ISO 3679)	37
Density / Specific Gravity at 20°C, g/ml (ISO 2811)	1.01
Hydroxyl Content, %	1.5
Hydroxyl Equivalent weight	1140

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

RECOMMENDATIONS FOR USE

SYNOCURE® 864 N 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 Tolonate™ HDB 75 MX (1) or Desmodur® N 75 series (2), the recommended ratios would be:

	on solid resin	as supplied
SYNOCURE® 864 N 60	1140	1900
Tolonate™ HDB 75 MX (1) or Desmodur® N 75 series (2)	191	255

Formulation Guidelines

SYNOCURE® 864 N 60 reacted with Tolonate™ HDB 75 MX (1) or Desmodur® N 75 series (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 catalyst or elevated temperatures will reduce this storage period.

To increase the initial rate of cure of SYNOCURE® 864 N 60 based paints, at both ambient 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 of use will depend on specific requirements, but typical metal contents would be 0.001% tin or 0.0015% zinc calculated on solid resin plus isocyanate.

SOLUBILITY

The solvents chosen for paints and lacquers based on SYNOCURE® 864 N 60 should be free from water and should not contain groups that react with isocyanates.

Esters and ketones are true solvents for this type of resin and are recommended for use in conjunction with aromatic hydrocarbon diluents such as xylene.

Notes: (1) Vencorex Chemicals, (2) Bayer MaterialScience

Product Safety

Please refer to the corresponding Safety Data Sheet.

Storage & Handling

SYNOCURE® 864 N 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

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See SDS for Health & Safety Considerations.

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For any use of Arkema's product in Medical Device applications, please contact Arkema's sales network.

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