SYNOCURE® 865 EEP 70

PROTECTIVE & MARINE COATINGS **ARKEMA COATING RESINS**

Product Application details

SYNOCURE® 865 EEP 70 is a hydroxy functional acrylic resin developed for use in two component systems requiring higher application solids.
SYNOCURE® 865 EEP 70 has exceptional resistance to exposure to weather and UV light. Coatings based on SYNOCURE® 865 EEP 70 have excellent durability and gloss retention, a feature normally associated with higher hydroxyl content acrylics which are consequently more expensive to use. It is particularly suitable to high quality topcoats for Protective coatings also ACE and Vehicle Refinishing.

Performance Benefits

- Excellent exterior durability
- Good gloss, flow and DOI
- Good drying times

Polymer Type

- Solventborne Acrylic

Sales Specifications

Solid Content at 125°C, % (ISO 3251)	68 - 72
Viscosity at 25°C, mPa.s (ISO 3219)	4000 - 6000
Colour, Hazen scale (ISO 6271)	50 max
Acid value, mg KOH/g (ISO 2114)	8 max

Other Characteristics[1]

Volatile	Ethyl-3-ethoxypropionate
Flash point, °C (ISO 3679)	41
Density / Specific Gravity at 20°C, g/ml (ISO 2811)	1.09
Hydroxyl Content, %	3.1
Hydroxyl Equivalent weight	550

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® 865 EEP 70 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.
SYNOCURE® 865 EEP 70 reacted with Desmodur® N 3390 series (1), Desmodur® N 75 series (1), Tolonate™ HDT-LV 2 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. Although the use of catalysts or higher temperatures will reduce this storage period, paints will still remain usable for many hours.
To increase the initial rate of cure of SYNOCURE® 865 EEP 70 based paints, at both ambient temperature and under low bake conditions, the use of tin catalyst in the form of dibutyl tin dilaurate is strongly recommended. The level used will depend on specific requirements, but the recommended minimum level would be 0.001% tin calculated on total solid resin plus isocyanate.
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 3390 series (1), Desmodur® N 75 series (1), Tolonate™ HDT-LV2 (2) orTolonate™ HDB 75 MX (2), the recommended ratios would be:

	on solid resin	as supplied
SYNOCURE® 865 EEP 70	550	786
Desmodur® N 3390 series (1)	191	212
Desmodur® N 75 series (1)	191	255
Tolonate™ HDB 75 MX (2)	191	255
Tolonate™ HDT-LV2 (2)	183	183

SOLUBILITY

The solvents chosen for paints and lacquers based on SYNOCURE® 865 EEP 70 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® 865 EEP 70 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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