SYNOCURE®

TECHNICAL DATA SHEET

SYNOCURE® 866 EEP 75

Acrylic polyol

PRODUCT APPLICATION DETAILS

SYNOCURE® 866 EEP 75 is a high solids content hydroxy functional acrylic resin developed for use in compliant two component systems when cured with polyisocyanate.
SYNOCURE® 866 EEP 75 is particularly well suited for use in high quality industrial coatings with good gloss and DOI. Such coatings also have exceptional exterior durability and gloss retention and are suitable for vehicle refinish, ACE or protective coatings.

SALES SPECIFICATIONS

	CHARACTERISTICS	METHODS
Solid content (125°C)	73 - 77 %	ISO 3251
Viscosity (25°C)	2500 - 4000 mPa.s	ISO 3219
Color	200 max Pt/Co	DIN EN 1557
Acid value	6 - 10 mg KOH/g	ISO 2114

OTHER CHARACTERISTICS[1]

	CHARACTERISTICS	METHODS
Solvent	Ethyl-3-ethoxypropionate	-
Flash point	52 °C	ISO 3679
Density	1.07 g/ml	ISO 2811
Hydroxyl content	4.2 %	-
Hydroxyl equivalent weight	400	-

[1] The data provided for these properties are typical values, intended only as guides, and should not be construed as sales specifications

MARKETS

Coatings & Inks

- Industrial Coating
  - Automotive - OEM
  - Automotive - Refinish
  - General Industry
  - Protective And Marine Coating

PERFORMANCE BENEFITS

- Excellent exterior durability
- Excellent drying times
- Good application properties
- Excellent chemical resistance

SYNOCURE® 866 EEP 75

FORMULATION GUIDELINES

RECOMMENDATIONS FOR USE

SYNOCURE® 866 EEP 75 should be mixed with the selected polyisocyanate just prior to application. Stoichiometric mixing ratios are recommended to obtain optimum performance. Alternative ratios may be suitable for some applications, but should be evaluated by the coating formulator beforehand.
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 Tolonate™ HDT-LV [1], the recommended ratios would be:
- on solid resins: SYNOCURE® 866 EEP 75/Tolonate™ HDT-LV [1] = 400/183
- as supplied: SYNOCURE® 866 EEP 75/Tolonate™ HDT-LV [1] = 533/183

Conventional polyisocyanates such as Tolonate™ HDB 75 MX [1] or Desmodur® N 75 series [2] can be used successfully but for the highest solids content at application and the highest weatherability resistance, a low viscosity type such as Tolonate™ HDT-LV [1] is recommended.
SYNOCURE® 866 EEP 75 reacted with Tolonate™ HDT-LV [1] 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 several hours.
To increase the initial rate of cure of SYNOCURE® 866 EEP 75 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 0.01% tin calculated on total solid resin plus isocyanate.

SOLUBILITY

The solvents chosen for paints and lacquers based on SYNOCURE® 866 EEP 75 should be free of water and should not contain groups that react with isocyanates.

OTHER ADDITIVES

To optimise the performance of SYNOCURE® 866 EEP 75, when used in a clear varnish formulation, the use of Tinuvin® 1130 [3] and Tinuvin® 292 [3] in a 1:1 ratio is recommended.

Notes: [1] Vencorex Chemicals, [2] Bayer MaterialScience, [3] Ciba

PRODUCT SAFETY

Please refer to the corresponding Safety Data Sheet.

STORAGE AND HANDLING

SYNOCURE® 866 EEP 75 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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