

COATING RESINS

TECHNICAL DATA

SYNOCURE 855 BA 70

SALES SPECIFICATION

Non-volatile content, % @ 150°C	68-72
ViscosityCPS at 25°C	4000-6000
Colour, Gardner scale (ISO 4630)	≤ 1
Acid value, mg KOH/g (ISO 3682)	3 - 7

OTHER PROPERTIES

Volatile	Butyl acetate / aromatic solvent 160-180, (3:1)
Non-volatile content, % @ 150°C	70
Flash point, °C (ISO 3679)	31
Density at 20°C (ISO 2811)	1.05
Hydroxyl content, %	4.5
Hydroxyl equivalent weight	378

Note - Hydroxyl content quoted relative to solid resin

PRODUCT INFORMATION

SYNOCURE 855 BA 70 is a high solids content hydroxy functional acrylic resin developed for use in compliant two component systems when cured with polyisocyanate.

SYNOCURE 855 BA 70 is recommended for the formulation of high build compliant coatings for ACE, general industrial applications, protective and marine coatings, transport coatings and automotive refinishing.

Characteristics of SYNOCURE 855 BA 70 based coatings include:

- Fast dry time
- Hard resistant films
- Good application properties
- Excellent chemical resistance
- Excellent exterior durability

RECOMMENDATIONS FOR USE:

REACTION RATIOS: SYNOCURE 855 BA 70 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:

Equivalent weights: Hydroxyl EqW (EqW)	$\frac{17 \times 100}{\% \text{ OH}}$	Isocyanate EqW	$\frac{42 \times 100}{\% \text{ NCO}}$
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Conventional polyisocyanates such as Desmodur N75 ⁽¹⁾ and Tolonate HDB75MX ⁽²⁾ can be used successfully but for the

highest solids content at application a low viscosity type such as Tolonate HDT-LV ⁽²⁾ is recommended.

Using Tolonate HDT-LV ⁽²⁾, a 100% non-volatile isocyanate, the recommended ratios would be:

	on solid resin	as supplied
SYNOCURE 855 BA 70	378	540
Tolonate HDT-LV ⁽²⁾	183	183
N-75	191	255

SOLVENTS: The solvents chosen for paints and lacquers based on SYNOCURE 855 BA 70 should be free of water and should not contain groups that react with isocyanates.

POT LIFE: SYNOCURE 855 BA 70 reacted with Tolonate HDT-LV ⁽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, although paints will still remain usable for several hours.

CATALYSTS: To increase the initial rate of cure of SYNOCURE 855 BA 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.

UV ABSORBERS: To optimise the performance of SYNOCURE 855 BA 70, when used in a clear varnish formulation, the use of Tinuvin 1130 ⁽³⁾ and Tinuvin 292 ⁽³⁾ in a 1:1 ratio is recommended.

CRAY VALLEY

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the resin in other ways should be discussed with Cray Valley before any action is taken.

Notes: ⁽¹⁾ Bayer ⁽²⁾ Rhodia. ⁽³⁾ Ciba Chemicals.

SYNOCURE 855 BA 70 should only be used in applications consistent with the above recommendations. Proposals to use

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Page 2 of 1

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