

## COATING RESINS

### TECHNICAL DATA

### SYNOCURE AC516S

#### SALES SPECIFICATION

Non-volatile content, % @ 150°C	58-62
Viscosity in CPS at 25°C (AFNOR XPT51213)	2200-3200
Colour, Gardner scale (ISO 4630)	≤ 2
Acid value, mg KOH/g (ISO 3682)	≤10

#### OTHER PROPERTIES

Volatile	C- 9
Non-volatile content, % @ 150°C	60
Flash point, °C (ISO 3679)	29
Density at 20°C (ISO 2811)	0.99
Hydroxyl content, %	2.6
Hydroxyl equivalent weight	650

Note - Hydroxyl content quoted relative to solid resin

#### PRODUCT INFORMATION

**SYNOCURE AC516S** is a hydroxy lfunctional acrylic resin developed for use in compliant two component systems when cured with polyisocyanate.

**SYNOCURE AC516S** is recommended for the formulations which are crosslink at room temperature with polyisocyanate. and is particularly recommended where weatherability is a major factor. Excellent Duraibility is a key feature of SYNOCURE AC516S.

Characteristics of SYNOCURE AC516S based coatings include:

- Good Flexibility
- Good weatherability
- Excellent exterior durability
- Good Humidity and Salt Resistance
- Ideal choice for Car refinishing, Wood and Plastic

#### RECOMMENDATIONS FOR USE:

**REACTION RATIOS:** SYNOCURE AC516S 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 (EqW)	$\frac{42 \times 100}{\% \text{ NCO}}$
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Conventional polyisocyanates such as Desmodur N75 <sup>(1)</sup> or Tolonate HDB75MX <sup>(2)</sup> can be used successfully

	on solid resin	as supplied
SYNOCURE AC516S	650	1083
AR - 75	242	323
N- 75	191	255

**SOLVENTS:** The solvents chosen for paints and lacquers based on SYNOCURE AC516S should be free of water and should not contain groups that react with isocyanates.

**POT LIFE:** SYNOCURE AC516S reacted with N-75 and AR - 75 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 AC516S 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.

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**SYNOCURE AC516S** should only be used in applications consistent with the above recommendations. Proposals to use the resin in other ways should be discussed with Cray Valley before any action is taken.

Notes: N – 75 From Bayer  
AR – 75 From CVRIPL  
UV Absorber - Cieba

**UV ABSORBERS:** To optimise the performance of SYNOCURE AC516S, when used in a clear varnish formulation, the use of Tinuvin 1130<sup>(3)</sup> and Tinuvin 292<sup>(3)</sup> in a 1:1 ratio is recommended.

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