

## COATING RESINS

### TECHNICAL DATA

### SYNOCURE INC141

#### SALES SPECIFICATION

Non-volatile content, % @ 150°C	58-62
Viscosity in CPS at 25°C	1500-2000
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 INC141** is a hydroxyl functional acrylic resin developed for use in compliant two component systems when cured with polyisocyanate.

**SYNOCURE INC141** is recommended for the formulations which are cross link at room temperature with poly isocyanate. and is particularly recommended where weatherability is a major factor. Excellent Durability is a key feature of SYNOCURE INC141.

Characteristics of SYNOCURE INC141 based coatings include:

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

#### RECOMMENDATIONS FOR USE:

**REACTION RATIOS:** SYNOCURE INC141 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 <sup>(1)</sup> or Tolonate HDB75MX <sup>(2)</sup> can be used successfully

on solid resin                      as supplied

SYNOCURE INC141	650	1083
Tolonate HDB75MX	191	255
N- 75	191	255

**SOLVENTS:** The solvents chosen for paints and lacquers based on SYNOCURE INC141 should be free of water and should not contain groups that react with isocyanates.

**POT LIFE:** SYNOCURE INC141 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 INC141 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 INC141, 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.

**SYNOCURE INC141** 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.

# CRAY VALLEY

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Notes: N – 75 From Bayer  
Tolonate HDB75MX from Rhodia  
UV Absorber - Cieba

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