

COATING RESINS

TECHNICAL DATA

SYNOLAC 5002(70%)

SALES SPECIFICATION

Non-volatile content, % @ 150°C	68-72
Viscosity in Secs at 30°C (50% in Xylene) By B-4 Ford Cup	160-180
Colour, Gardner scale (ISO 4630)	≤ 5
Acid value, mg KOH/g (ISO 3682)	≤12

OTHER PROPERTIES

Volatile	Xylene
Non-volatile content, % @ 150°C	70
Flash point, °C (ISO 3679)	28
Density at 20°C (ISO 2811)	0.98
Hydroxyl content, %	2.89
Hydroxyl equivalent weight	588
Oil Type	Mix Fatty Acid
Oil Length	38%

Note - Hydroxyl content quoted relative to solid resin

PRODUCT INFORMATION

SYNOLAC 5002 (70%) is a hydroxyl functional coconut alkyd resin developed for use in compliant two component systems when cured with polyisocyanate.

SYNOLAC5002 (70%) is recommended for the formulations which are crosslink at room temperature with polyisocyanate. It is particularly recommended where economy in use is a major factor.

Characteristics of SYNOLAC 5002 (70%) based coatings include:

- Excellent Gloss
- Excellent hardness along with adequate flexibility.
- Good durability.

RECOMMENDATIONS FOR USE:

REACTION RATIOS: SYNOLAC 5002 (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:

$$\text{Equivalent weights: Hydroxyl EqW} \quad \text{Isocyanate EqW}$$
$$(\text{EqW}) \quad \frac{17 \times 100}{\% \text{ NCO}} \quad \frac{42 \times 100}{\% \text{ OH}}$$

Conventional polyisocyanates such as Desmodur N75 ⁽¹⁾ and Tolonate HDB75MX ⁽²⁾ can be used successfully

	On Solid Resin	On Solution
SYN 5002 (70%)	588	840
N - 75	191	255
AR - 75	243	324

SOLVENTS: The solvents chosen for paints and lacquers based on SYNOLAC 5002 (70%) should be free of water and should not contain groups that react with isocyanates.

POT LIFE: SYNOLAC 5002(70%) reacted with Tolonate HDB-75MX ⁽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 SYNOLAC 5002 (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.

USES:

This resin is used for economical Polyisocyanate system.

SYNOLAC 5002 (70%) 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.