

TECHNICAL DATA SHEET

SYNOCURE® 542 X 55

Acrylic polyol

PRODUCT APPLICATION DETAILS

SYNOCURE® 542 X 55 is a hydroxy functional acrylic resin designed to crosslink at room temperature with polyisocyanates, and is particularly recommended where economy in use is a major factor.

SALES SPECIFICATIONS

	CHARACTERISTICS	METHODS
Solid content (125°C, %)	54 - 56	ISO 3251
Viscosity (25°C, mPa.s)	800 - 1800	ISO 3219
Color (Hazen)	100 max	ISO 6271
Acid value (mg KOH/g)	10 max	ISO 2114

OTHER CHARACTERISTICS¹

	CHARACTERISTICS	METHODS
Solvent	Xylene	-
Density (25°C, g/mL)	0.98	-
Hydroxyl content (%)	1.8	-
Hydroxyl equivalent weight	945	-

¹The 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 - Refinish
 - General Industry
 - Wood Furniture

PERFORMANCE BENEFITS

- Exceptionally fast drying
- High gloss
- Low isocyanate requirement

SYNOCURE® 542 X 55

FORMULATION GUIDELINES

RECOMMENDATIONS FOR USE

SYNOCURE® 542 X 55 should be mixed just prior to application with the selected polyisocyanate. The mixing ratio is not critical although it is preferable to use stoichiometric ratios to obtain optimum performance.

Using Desmodur® N 75 series ⁽¹⁾ or Tolonate™ HDB 75 MX ⁽²⁾, the recommended ratios would be:

- on solid resin: SYNOCURE® 542 X 55 / Desmodur® N 75 series ⁽¹⁾ or Tolonate™ HDB 75 MX ⁽²⁾ = 945 / 191
- as supplied: SYNOCURE® 542 X 55 / Desmodur® N 75 series ⁽¹⁾ or Tolonate™ HDB 75 MX ⁽²⁾ = 1717 / 255

SYNOCURE® 542 X 55 reacted with Desmodur® N 75 series ⁽¹⁾ or Tolonate™ HDB 75 MX ⁽²⁾ in stoichiometric proportions has a usable pot life at spraying viscosity in half of a working day at normal room temperature. The use of catalysts or higher temperatures will reduce this storage period.

To increase the initial rate of cure of SYNOCURE® 542 X 55 paints, at both ambient temperature and under low bake conditions, the use of tin or zinc catalysts in the form of dibutyl tin dilaurate or zinc octoate is recommended. The levels used will depend on specific requirements, but typical metal contents calculated on total solid resin would be 0.001% tin or 0.0015% zinc.

SOLUBILITY

The solvents chosen for paints and lacquers based on SYNOCURE® 542 X 55 should be free of water and should not contain groups that react with isocyanates.

Esters and ketones are true solvents for this type of system and are recommended for use in conjunction with aromatic hydrocarbon diluents such as xylene.

Notes: ⁽¹⁾ Covestro, ⁽²⁾ Vencorex Chemicals

PRODUCT SAFETY

Please refer to the corresponding Safety Data Sheet.

STORAGE AND HANDLING

SYNOCURE® 542 X 55 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 12 months.

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