

TECHNICAL DATA SHEET

SYNOCURE® 861 X 55

Acrylic polyol

PRODUCT APPLICATION DETAILS

SYNOCURE® 861 X 55 is a hydroxy functional acrylated polyester designed for crosslinking at both room temperature and low stoving temperatures with suitable polyisocyanates.

SYNOCURE® 861 X 55 is primarily intended for use in vehicle refinishing applications, both as a medium for excellent primer surfacers and for finishing coats.

SALES SPECIFICATIONS

	CHARACTERISTICS	METHODS
Solid content (125°C)	54 - 56 %	ISO 3251
Viscosity (25°C)	1500 - 2500 mPa.s	ISO 12058-1
Color	150 max Hazen	ISO 6271
Acid value	12 max mg KOH/g	ISO 2114

OTHER CHARACTERISTICS¹

	CHARACTERISTICS	METHODS
Solvent	Xylene	-
Flash point	24 °C	ISO 3679
Density	1 g/ml	ISO 2811
Hydroxyl content	4.1 %	-
Hydroxyl equivalent weight	415	-

¹The data provided for these properties are typical values, intended only as guides, and should not be construed as sales specifications

MARKETS & APPLICATIONS

Coatings & Inks

- Industrial Coating
 - Automotive - OEM
 - Automotive - Refinish
 - Coil
 - General Industry
 - Protective And Marine Coating

PERFORMANCE BENEFITS

- High solids at application viscosity
- Excellent gloss
- Good sanding properties
- Excellent metal control in polychromatic finishes

SYNOCURE® 861 X 55

FORMULATION GUIDELINES

RECOMMENDATIONS FOR USE

SYNOCURE® 861 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.

The reaction ratio is calculated from the respective equivalent weight or hydroxyl and isocyanate content of the reactants.

The relationship is:

Hydroxyl Equivalent Weight = $(17 \times 100) / \%OH$

Isocyanate Equivalent Weight = $(42 \times 100) / \%NCO$

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

- on solid resins: SYNOCURE® 861 X 55/Desmodur® N 75 series ⁽¹⁾ or Tolonate™ HDB 75 MX ⁽²⁾ = 415/191

- as supplied: SYNOCURE® 861 X 55/Desmodur® N 75 series ⁽¹⁾ or Tolonate™ HDB 75 MX ⁽²⁾ = 755/255

At normal temperatures, the surface drying time of paints based on this combination is typically 25 min, with hard dry in 75 min.

SYNOCURE® 861 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 excess of a full 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® 861 X 55 paints, at both room 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® 861 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.

OTHER ADDITIVES

Byk®-P 104 S ⁽³⁾ has been successfully used whenever a wetting agent has been necessary.

Suitable flow additives include Byk®-344 ⁽³⁾. There are also a number of polymeric additives which may be used for improving flow.

Notes: ⁽¹⁾ Bayer MaterialScience, ⁽²⁾ VENCOREX® Chemicals, ⁽³⁾ Byk

PRODUCT SAFETY

Please refer to the corresponding Safety Data Sheet.

STORAGE AND HANDLING

SYNOCURE® 861 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 from the shipping date.

Shelf Life (Months): 12

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Disclaimer - Please consult Arkema's disclaimer regarding the use of Arkema's products on <https://www.arkema.com/global/en/products/product-safety/disclaimer/> which is incorporated herein by reference and made a part hereof.

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