

TYPE

Hydroxy functional acrylic resin; cross-linkable with polyisocyanates for high-solids lacquers

FORM OF DELIVERY (f.o.d.)

70 % in butyl acetate (70BAC)

Average hydroxyl content (solid resin)

approx. 2.4 %

OH equivalent weight (f.o.d.)

approx. 1000 g

PRODUCT DATA

Determined per batch:

Dynamic Viscosity DIN EN ISO 3219

dynamic viscosity (25 1/s; 23 °C)	[mPa.s]	2200 - 3800
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Colour Scale (Hazen) DIN EN ISO 6271-1

Hazen colour value		<= 80
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Hydroxyl Value (cat.) DIN EN ISO 4629

hydroxyl value (solid matter content)	[mg KOH/g]	70 - 90
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Non-Volatile Matter DIN EN ISO 3251

non-volatile matter (1 h; 125 °C; 2 g; ethyl acetate)	[%]	68 - 72
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Not continually determined:

Colour / Appearance VLN 250

colour appearance		colourless clear
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Density (Liquids) DIN EN ISO 2811-2

density approx. (20 °C)	[g/cm³]	1,04
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Flash Point DIN EN ISO 1523

flash point approx.	[°C]	26
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SPECIAL PROPERTIES

- High solids content at application viscosity
- Good drying speed
- Good adhesion to metals
- Very good mechanical properties
- Good gloss and good outdoor durability

SUGGESTED USES

Macrynal VSM 2570 is a hydroxy functional acrylic resin cross-linkable with aliphatic polyisocyanates to formulate air drying and forced drying 2-pack high solids coating systems.

In pigmented topcoats (pigment/binder = 1 : 1) a solids content of 65 % at application viscosity of 55 s (efflux time DIN EN ISO 2431, 4 mm, 23 °C) can be achieved.

To ensure that optimal properties are obtained it is necessary to have complete crosslinking. For stoichiometric (equivalent) crosslinking (NCO : OH = 1 : 1) approx. 100 parts per weight Macrynal VSM 2570 (f.o.d.) require approx. 21 parts per weight Desmodur N 3390 (Covestro).

Catalysis

Drying can be accelerated by addition of suitable catalysts like dibutyl tin dilaurate (0.2 - 0.5 % of a 1 % solution, based on solid resin) in combination with amines like diethyl amino ethanol (approx. 0.2 %, based on solid resin). Potlife is thereby reduced, however.

Dilution

Suitable diluents are butyl acetate, methyl isobutyl ketone, 2-methoxypropyl acetate or aromatic solvents like solvent naphtha 150/180. Anhydrous solvents as well as solvents free of hydroxy functional groups should be used in the presence of isocyanates.

Pigments

Inert pigments and extenders are suited for pigmentation. Pigments with basic surface treatment can act as additional catalyst and shorten the potlife even more.

Additives

To improve levelling Additol VXL 4930 is recommended. Additol VXL 6212 has proved to be an effective wetting agent.

STORAGE

At temperatures up to 25 °C storage stability packed in original containers amounts to at least 730 days.

DISTINGUISHING FEATURES

Compared to Macrynal SM 500, Macrynal VSM 2570 provides higher solids content and better outdoor durability.