MACRYNAL® SM 512/65BACX

Technical Datasheet

TYPE

Hydroxy functional acrylic resin, designed for crosslinking with polyisocyanates

FORM OF DELIVERY (f.o.d.)

65 % in butylacetate / xylene (65BACX)

Average hydroxyl content (solid resin)

approx. 2.5 %

PRODUCT DATA

Determined per batch:

Dynamic Viscosity DIN EN ISO 3219 dynamic viscosity (25 1/s; 23 °C)	[mPa.s]	6500 - 10000
Colour Scale (Hazen) DIN EN ISO 6271-1 Hazen colour value		<= 100
Hydroxyl Value (cat.) DIN EN ISO 4629 hydroxyl value (solid matter content)	[mg KOH/g]	75 - 90
Non-Volatile Matter DIN EN ISO 3251 non-volatile matter (1 h; 125 °C; 2 g; EAC)	[%]	63 - 67

Not continually determined:

Density (Liquids) DIN EN ISO 2811-2 density approx. (20 °C)	[g/cm³]	1,01
Flash Point DIN EN ISO 1523 flash point approx.	[°C]	26

DILUTABILITY

Very good with aromatic solvents, solvent naphtha, ketones, esters and glycol ethers.

Not dilutable in white spirit.

COMPATIBILITY

Compatible in all ratios with Vialkyd VAS 9904 (for pigment pastes) and with Macrynal SM 510n. Compatible with nitrocellulose. Limited compatibility with cellulose acetate butyrate. Good compatibility with aliphatic isocyanates and Desmodur L 75. The compatibility with other aromatic isocyanates must be ckecked case by case.

SUGGESTED USES

Varnishes for industrial use

The good compatibility with Tolonate HDB and Desmodur N allows the production of fast drying primers and top coats for spray applications.

Curing with polyisocyanates

Considering a stoichiometric ratio between reactive groups (NCO : OH = 1 : 1), the amount of polyisocyanate, referring to 100 parts of solid Macrynal SM 512, can be calculated with the following formula:

$$\text{polyisocyanate (f.o.d.)} = \frac{42 \times 100 \times \text{OH\% (solid resin)}}{17 \times \text{NCO\% (f.o.d.)}}$$

42 = molecular weight of NCO groups
17 = molecular weight of OH groups

To ensure that optimal properties are obtained with Desmodur N it is necessary to provide complete crosslinking.
In case of 100% degree of crosslinkage the amount of polyisocyanate needed for 100 parts of Macrynal SM 512 (as delivered) can be calculated as follows:

Desmodur N/75 %	25 parts by weigth

STORAGE

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

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