

TECHNICAL DESCRIPTION
JULY 2016

Cancels and replaces all previous editions

VINALKYD 520 PD – TA – BLE



Orthophthalic unsaturated polyester resin

- Description:** It is a medium reactive, preaccelerated, tixotropic, orthophthalic unsaturated polyester resin. Contains special additive for decreasing of styrene emissions in a work environment. Provides cured laminate a tackfree surface. The resin contains a peroxide indication system, which effects a color change from bluish to pale green after addition of catalyst.
- Use:** The resin has good mechanical strength properties and suitable for fibreglass articles for constructions and industry purposes. The hardening is carried by addition of hardener MEKP-50 (Butanox M-50). Reinforcement is made by glass fibre addition up to 60 % in several layers.
- Very good wetting properties of fibre glass;
 - Good mechanical properties.
- Classification:** Vinalkyd 520 PD- TA – BLE correspond to type 1140 according DIN 16 946/2 Meets the requirements of EU legislation.

CHARACTERISTICS

INDEXES	NORM
Appearance: (visually)	Blue coloured tixotropic liquid
Non-volatile content: (BNS EN ISO 3251)	57 ±1,5%
Viscosity Brookfield at 25°C: (sp.2, 2 rpm) (ISO 2555)	800-1300 mPa.s
Viscosity Brookfield at 25°C: (sp.2, 20 rpm) (ISO 2555)	450-600 mPa.s

Tixotropic index (sp.2, 2/20rpm): min 2,2
(ASTM D 2196-05 (B))

Reactivity at 20°C:
(100 g resin + 1,5 g Butanox M-50)

	Summer:	Winter:
- gelling time	20- 27 min	10-18 min
- hardening time	13 - 23 min	13-21 min
- temperature maximum/Tmax	min 175°C	min 175°C

(Test Method)

ADDITIONAL INFORMATION

Density at 20°C: 1,1 g/cm³
(BNS ISO 2811-1)

Flash point, closed pot: 34°C
(BNS ISO 2719)

Physical-mechanical properties

Hardening condition: unreinforced resin; 1,5 % Butanox M-50; 24h at room temperature
Post -curing: 16 h at 40°C

Index	Value
Tensile Strength: (ISO 527-1,2)	min 70 MPa
Flexural Strength: (ISO 178)	min 120 MPa
Elongation at break: (ISO 527-1,2)	min. 2.0 %
HDT: (BNS EN ISO 75-1,2)	min 95°C
Glass Transition: (ASTM E 1545-00)	min 105°C
Hardness at 25°C: (ASTM D 2583)	min 40 (Barcol 934-1)
Water Absorption (24 hours): (ISO 62)	max 0,2%

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Solubility:	It dissolves in styrene and acetone.
Application:	<p>Vinalkyd 520 PD-TA-BLE has to be homogenized well before use. It is curing with following hardening system: Add 15 g MEKP-50 (Butanox M-50) to 1000 g resin. The mixture should be well homogenized and then used for preparation of the articles. The viability of the mixture is: from 20 to 27 minutes (for summer) and from 10 to 18 minutes (for winter). It depends on the temperature of the resin, as the process of gelling accelerates additionally at temperature higher than 20°C, and the lower temperature slows down the time of gelling.</p>
Package:	In metal conic cans 22 L, metal barrels; cisterns from stainless steel.
Storage:	<p>Store the packed unsaturated polyester resin in sheltered, dry and fireproof warehouses, protected from direct sunlight, at temperature up to 25°C. In case of separation the system has to be homogenized before usage. Prolonged storage or storage outside of recommended conditions can influence on liquid resin properties like viscosity and gel time. An addition of 0.5-1.0% Co-1% may be necessary to restore the original potlife. Storage shelf life - 3 months from the production date.</p>
Hygiene, safety work and ecology:	Refer to the Material Safety Data Sheet for further information on the safe storage, use and handling of Vinalkyd 520 PD-TA-BLE. The Material Safety Data Sheet (MSDS) should always be read and understood thoroughly before handling the product, and adequate safety procedures should be followed.

The present technical description has the purpose to inform the clients on the quality of our product. The data herein is based on our present best knowledge. We invite our clients before work to check the quality of the product or its adaptation to the base and to make an experimental application. Our clients must be sure, that the present technical description hasn't been changed or replaced by a newer edition.

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