

## Vinalkyd 550 PE-R



### Orthophthalic unsaturated polyester resin

- Description:** It is orthophthalic, high reactive, non-accelerated, non-tixotropic unsaturated polyester resin design for general purpose glass reinforced application (GRP)
- Use:** The resin has good mechanical strength properties and suitable for boat construction, car body parts, cabins, constructions and industry purposes. The hardening is carried by addition of Accelerator Co-2% and Hardener MEKP-50 (Butanox M-50). Reinforcement is made by glass fibre addition up to 60 % in several layers.
- It can be applied after gel coats;
  - Very good wetting properties of fibre glass
  - Good mechanical properties
  - On the last coating might be applied top coat
- Classification:** Meets the requirements of EU legislation .

## Characteristics

INDEXES	NORM
<b>Appearance:</b> (visually)	Transparent syrup-like liquid
<b>Gardner color:</b> (BNS ISO 4530)	max.2
<b>Viscosity Brookfield at 25°C, sp.3/60 rpm:</b> (ISO 2555)	550-850 mPa.s
<b>Acid number:</b> (BNS EN ISO 3682)	max 30 mgKOH/g

**Orgachim Resins®**

<b>Non-volatile content, 1g/125°C:</b> (BNS EN ISO 3251)	65±1%
<b>Reactivity at 82°C:</b>	
- gel time from 65 to 88°C	4-9 min
- hardening time	5-10 min
- Exothermic peak ( BNS EN ISO 584)	min 160°C

## ADDITIONAL INFORMATION

<b>Reactivity at 25°C:</b>	
- gelling time	7 - 12 min
- hardening time/from gel time to Tmax/ - temperature maximum (Test Method)	5 - 10 min min. 160°C

<b>Density at 20°C:</b> (BNS EN ISO 2811-1)	1,13 g/cm <sup>3</sup>
--	------------------------

<b>Flash point:</b> (BNS ISO 2719)	33°C
---------------------------------------	------

<b>Modification:</b>	A (accelerated) LV (low viscosity)
----------------------	---------------------------------------

## Physical-mechanical properties

**Hardening system:** 1% Co-2% + 2% MEKP  
**Hardening conditions:** 24 h at room temperatures  
 Post-curing 16h at 40 °C

Index	Value
<b>Tensile strength:</b> (BNS EN ISO 527-1,2)	min. 70 MPa
<b>Flexural strength:</b> (BNS EN ISO 178)	min. 140 MPa
<b>Flexural moduls:</b> (BNS EN ISO 178)	min.3400 MPa
<b>Elongation at break:</b> (BNS EN ISO 527-1,2)	min. 2%
<b>HDT:</b> (BNS EN ISO 75-1,2)	min. 67°C

<b>Hardness at 25°C (Barcol)</b> (ASTM D 2583)	min. 50
<b>Water absorption (24 hours)</b> (ISO 62)	max.0.2%
<b>Solubility:</b>	It dissolves in styrene and acetone.
<b>Application:</b>	Unsaturated Polyester resin Vinalkyd 550 PE-R hardens after the following hardening system: Add 10 g Co-2% and 20 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 7 to 12 minutes and depends on the temperature of the resin, as the process of gelling accelerates additionally at temperature higher than 25°C, and the lower temperature slows down the time of gelling.
<b>Packaging:</b>	In metal conic cans; metal barrels and cisterns from stainless steel
<b>Storage:</b>	Store the packed unsaturated polyester resin in sheltered, dry and fireproof warehouses, protected from direct sunlight, at temperature up to 25°C. Storage shelf life - 6 months from the production date. <b>Attention!</b> Don't allow direct contact of organic peroxides with accelerators when using, transporting and storing.
<b>Hygiene, safety work and ecology:</b>	Refer to the Safety Data Sheet for further information on the safe storage, use and handling of Vinalkyd 550 PE-R. 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.

---

**Orgachim Resins®**

Ruse 7000, 21 Treti mart Blvd., tel.: +359 82 886 340; fax: +359 82 886 340  
[www.orgachimresins.bg](http://www.orgachimresins.bg)