

## TECHNICAL INFORMATION

# POLIMAL<sup>®</sup>

# 1601 P

### Application

**Polimal<sup>®</sup> 1601 P** is designed for production of flame retardant polyester – glass laminates by hand lay-up or spray lay-up. The main application of this laminates is in railway industry.

### Resin characteristics

**Polimal<sup>®</sup> 1601 P** is accelerated, thixotropic, flame retardant, unsaturated polyester resin. It contains mineral fillers.

**Laminate made on the basis of Polimal 1601 P and Gelcoat 1600 P meets the requirement R1 according to EN 45545-2:2013 for safety level HL1 and HL2.**

### Typical parameters

Parameter	Unit	Value
<b>Viscosity at 25°C</b> acc. to ISO 3219, sp.21/20 rpm/min	cP	<b>600-900</b>
<b>Viscosity at 23°C</b> acc. to ISO 2555, sp. 3/50 rpm/min	cP	<b>900-1100</b>
<b>Density at 23°C</b>	g/cm <sup>3</sup>	<b>1,4</b>
<b>Gel time at 25°C</b> acc.. to DIN 16945	min	<b>15-25</b>
<b>Flexural strenght</b> acc. to ISO 178	MPa	<b>50</b>
<b>Flexural modulus</b> acc. to ISO 178	MPa	<b>6000</b>
<b>Tensile strenght</b> acc. to ISO 527	MPa	<b>35</b>
<b>Elongation at break</b> acc. to ISO 527	%	<b>0,7</b>
<b>Heat Deflection Temperature (HDT)</b> acc. to ISO 75	°C	<b>90</b>
<b>Barcol hardness</b> acc. to ASTM-D 2583-95	°B	<b>40</b>
<b>Guarantee period*</b> (see:Storage conditions)	month	<b>3</b>

**Gel time with: 2% Luperox<sup>®</sup> K-1 S (MEKP)**

Curing conditions: 24h at ambient temperature + 2h at 80°C.

### Storage conditions

**Polimal<sup>®</sup> 1601 P** should be stored in close package in a dry, shady and cool places, adapted for storing flammable materials at temperatures not exceeding 25°C.

The contents of the package should be mixed at least once a month. Under the conditions mentioned above, the resin life is 3 months.

### Processing conditions

**The resin should be mixed precisely before use.**

Please note that the sediment is not on the bottom of the package and that the product is homogeneous. Good curing required ambient temperature above 18°C and low air humidity. The best curing conditions are obtained using 2% MEKP as hardener. It is possible to adjust gel time by varying of amount of hardener, the best within in the range of 1 – 2 %. The final curing could be optimize by postcuring at elevated temperatures.

**Polimal<sup>®</sup>** is the trade name reserved for unsaturated polyester resins produced by **CIECH - Sarzyna S.A.**

**Luperox<sup>®</sup>** is the trade name registered for products of **ARKEMA** company.

Data and suggestions included in this document are on the basis of our own tests and are considered by us as reliable. However, we cannot take any responsibility for actions and losses directly or indirectly resulted from using our products. User should check the product quality, safety and properties before its using.

### Note:

The information does not substitute Material Safety Data Sheet or Technical Specification, which are superior documents and are available on the customer's request.