

TECHNICAL INFORMATION

POLIMAL[®]

VE-2MM TP

Application

Polimal VE-2MM TP is recommended for production of chemical resistant compositions reinforced with fiberglass and/or mineral fillers.

Features

Polimal VE-2MM TP is accelerated, thixotropic, medium reactive vinyl ester resin, based on epoxide. The resin is characterized by good processing properties and high thermal and chemical resistance.

Typical parameters

Tested parameter/standard	Unit	Value
Viscosity, (at 25°C) acc. to ISO 3219	mPa s	250 ÷ 350
Gel time (at 25°C) acc. To ISO 2535	min	20 ÷ 30
Tensile strength acc. to ISO 527	MPa	75
Flexural strength acc. to ISO 178	MPa	130
Tensile modulus acc. to ISO 527	MPa	3500
Elongation at break acc. to ISO 527	%	3,5
Heat deflection temperature (HDT) acc. to ISO 75	°C	95
Barcol hardness ASTM-D 2583-95	°B	35
Guarantee period	months	3

Gel time with: 2% MEKP (e.g. Luperox[®] K-1).

The specified mechanical properties refer to non-reinforced resin after curing for 24 hours at room temperature and post-curing for 2 hours at 80°C.

Storage conditions

The resin should be stored in closed original containers, in dry, well ventilated and shaded storage rooms adapted for storing inflammable materials at a temperature below 25°C. Prolonged storage outside of recommended conditions can influence liquid resin properties like viscosity and gel time.

Processing conditions

The resin should be mixed before use. 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. In order providing optimal mechanical and resistance parameters is recommended to use glass veil with a grammage of 30g/m² made of C-glass as first laminate layer and post-curing at elevated temperature e.g. couple hours at 80°C. Post-curing is especially recommended if parts are intended for contact with chemicals

Polimal[®] is the trade name reserved for unsaturated polyester resins produced by **CIECH - Sarzyna S.A.**

Luperox[®] 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.

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Chemical Resistance Table

Assessment of chemical resistance of non-reinforced resin to undermentioned chemicals was carried out under laboratory conditions according to PN-78/C 89067 standard. Test specimens have seasoned for 24 hours at temperature 23°C and the for 4 hours at temperature 80°C.

Chemical	Concentration	Temperature, °C
Nitric acid	25%	50
Phosphoric acid	75%	80
Hydrochloric acid	20%	80
Hydrochloric acid	38%	45
Sulphuric acid	10%	90
Sulphuric acid	70%	75
Formic acid	25%	75
Acetic acid	15%	90
Acetic acid	25%	90
Acetic acid	50%	70
Acetic acid	80%	45
Aqueous ammonia	25%	25
Hydrogen peroxide	30%	40
Sodium hydroxide	1%	65
Sodium hydroxide	5%	65
Sodium hydroxide	25%	65
Sodium hydroxide	40%	65
Sodium hypochlorite	1-20%	50
Iron(III)chloride	All	90
Sodium chloride	All	90
Iron(III)sulphate	All	90
CuSO ₄ /H ₂ SO ₄ Electrolyte	20%	65
Ethyl alcohol	15%	50
Ethyl alcohol	45%	50
Carbon tetrachloride	100%	25
Phenol	100%	Not recommended at any temperature
Styrene	100%	Not recommended at any temperature
Acetone	100%	Not recommended at any temperature
Gasoline unleaded, non-containing methanol	100%	50