

APPLICATION METHOD

Letoxit® PR 131 +

Letoxit® EM 247 + Letoxit® EM 300

Version: 11/2011

Description

The system for casting is composed of three components:

resin Letoxit PR 187
curing agent Letoxit EM 295
accelerator Letoxit EM 300

The main advantages are:

- low viscosity
- long pot-life at room temperature
- low shrinkage
- low temperature during exothermal reaction

After curing the composition has good mechanical, electrical and heat properties.

Usage

System is intended to be used for processing RIM technologies and conventional casting process. It is suitable for produce of electroinsulation components (e.g. parts of electroinstalation, insulators, power, voltage and current transformers) for medium and high voltage outdoor applications.

Resin specification

Modified cycloaliphatic epoxy resin

	Norm	Resin Letoxit® PR 187
Density at 25°C (g/cm³)	PN-5M-11	1,15-1,16
Viscosity at 25°C (mPa.s)	PN-5M-01	1800-3000
Epoxy equivalent	PN-5M-20	198-230
Storage	-	12 months

Hardeners specification

Modified anhydride of dicarboxyle acid

	Norm	Hardener Letoxit® EM 247
Viscosity at 25°C (mPa.s)	PN-5M-01	50-70
Hardener equivalent	-	166

Mixture ratio

	Letoxit® PR 187 + Letoxit® EM 295 + + Letoxit® EM 300
Parts by weight	100 : 80 : 0,5 - 2,0



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Mechanic, thermomechanic, electric and physical properties

Cured testing samples conditions: 4h - 80°C + 8h - 140°C

Comosition: 100 parts by weight of Letoxit PR 187

80 parts by weight of Letoxit EM 295

1 part by weight of Letoxit EM 300

	Norm	Value
Flexural strength (MPa)	ČSN 640607	130 - 145
Tensile strength (MPa)	ČSN 640605	50 - 65
Impact strength (mJ/mm²)	DIN53453	26 - 36
Compression strength (MPa)	ČSN 640606	120 - 130
HDT (°C)	DIN 53458	100 - 110
Glass transition temperature(°C)	DTA	105
Coefficient of linear thermal expansion (10⁻⁶/K)	DIN 53752	50 - 60
Thermal conductivity (W/mK)	DIN 52812	0,2 - 0,3
Water absorption 24h/20°C (%)	ČSN 420112	0,25 - 0,35
Specific internal electrical resistance (ohm.cm)	DIN 53482	10 ¹⁵
Specific surface electrical resistance (ohm)	DIN 53482	10 ¹³
Dielectric strength (KV/mm)	ČSN 346463	22 - 25
Dielectric constant 25°C, 50Hz	ČSN 346466	3,2 - 3,4
Volumetric shrinkage (%)		1-2

Mechanic, thermomechanic, electric and physical properties

Cured testing samples conditions: 4h - 80°C + 8h - 140°C

Comosition: 100 parts by weight of Letoxit PR 187

80 parts by weight of Letoxit EM 295

1 part by weight of Letoxit EM 300

290 parts by weight of silica sand SUK20

	Norm	Value
Flexural strength (MPa)	ČSN 640607	120 - 130
Tensile strength (MPa)	ČSN 640605	3 - 4



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Elongation at break (%)	ISO 527	50 - 60
Impact strength (mJ/mm²)	DIN53453	12 - 15
Compression strength (MPa)	ČSN 640606	205 - 220
HDT (°C)	DIN 53458	100 - 110
Glass transition temperature(°C)	DTA	105
Coefficient of linear thermal expansion (10⁻⁶/K)	DIN 53752	30 - 40
Thermal conductivity (W/mK)	DIN 52812	0,9 – 1,0
Water absorption 24h/20°C (%)	ČSN 420112	0,05 - 0,08
Specific internal electrical resistance (ohm.cm)	DIN 53482	10 ¹⁵
Specific surface electrical resistance (ohm)	DIN 53482	10 ¹³
Dielectric strength (KV/mm)	ČSN 346463	30 - 35
Dielectric constant 25°C, 50Hz	ČSN 346466	4,0 – 4,2

Disposal of leftovers and containers

Leftovers of prepared and not used mix should be cured, leftovers of A component should be mixed with leftovers of B component and also passed to be cured, best in original containers. Cured adhesive is not hazardous and can be disposed of along with municipal waste.

Based on Waste Act, leftovers of separate components are classified as hazardous waste and are disposed of by incineration in special plants designed for such purposes.