ELANTAS

Secondary Insulation

Product Information
PED 1000-70@35%

Water Soluble Polyester
Electrical Insulation system
Dip & Bake / Trickle / Roll Dip

E314793

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Product Description

Elantas Zhuhai PED 1000-70@35% is an excellent all purpose water borne varnish that has been formulated to achieve the important qualities of economic efficiency, ease of use, ease of maintenance, non-polluting and safety compliant. It meets most state, local and federal clean air standards.

1000-70@35% is one of a family of well established resins, with a long service history and wide-based customer approval both in the USA and overseas. It is Underwriters Laboratory recognised – UL file No E314793.

The features of this system are as follows:

- Fast and low temperature curing
- Low VOC
- Excellent electrical and mechanical properties at temperature
- 130 - 220°C class EIS (file number E87039) i.e. thermal ratings up to 220°C
- Compatible with most insulation systems
- Water reducible to 10%(lowest) solids.
- No toxic fumes, spills clean easily with water.

NON POLLUTING AND SAFETY COMPLIANCE
PED 1000 when tested in accordance with EPA Method 24 as codified in 40 CFR 60* appendix A is low in air emission pollutants and has 1.3 pounds of Volatile Organic Compounds (VOC) per gallon. This VOC level puts it in compliance with most state and federal clean air emission standards.

MAKE-UP SOLVENT
PED1000-70@35% has less co-solvent and is reduced with water.

Areas of Application

PED1000-70@35% is designed for use on automated dip and bake plants and is particularly useful for the impregnation of small armatures and stator.

Processing

- Preheat to 60– 70°C unit part temperature. Recommended but not required.
- Allow unit to cool to 45-60°C before dipping into varnish.
- Dip unit in varnish for 1-5 minutes or until bubbling ceases.
- Drain unit for 3-15 minutes.
- Bake at 107-130°C for 1-3 hours depending on size of unit.

PED1000-70@35% Water Borne Varnish is shipped to the customer ready for solids reduction with water only. At a resin solids of 14 to 18%, the varnish is not only cost efficient, but displays full characteristics. The lowest solid content we recommend to use is 10% (Performance and process capability needs to be evaluated according to specific situations).

Maintenance is easy when careful and regular inspections of the varnish viscosity. The viscosity can usually be brought back to normal with an add of water or unused varnish.

The pH of PED1000-70@35% should be maintained between 6.0 - 10.0.

Packaging

Elantas PED1000-70@35% is currently sold in 200kg and 1000kg containers for ease of use.

Health & Safety

Refer to Elantas Zhuhai Material Safety Data Sheet (MSDS)

Shelf life

6 months.
Store in unopened containers. Drum stock should be stored at or below 25°C out of direct sunlight and away from heat sources.

3 months when stored under 35°C

Properties of component as supplied

properties	condition	Test Method	Typical Value
Appearance	-	Visual Inspection	Semitransparent Liquid
Viscosity	Tu 4 cup,25°C (resin:water=1:1)	ISO 2431 EEIZ-WI/RD 05.004	11-15 s
Solid content	1-1-150°C	ISO 3251 EEIZ-WI/RD 05.003	33-36 %
pH Value	25°C	ISO 6353 EEIZ-WI/RD 05.018	6-10
Tack free	1h，120°C	EEIZ-WI/RD 05.019	Tack free

Mechanical properties in cure condition

Bond strength, 2h@130°C (Twisted Coil)	25°C	IEC 61033 EEIZ-WI/RD 05.053	>100 N

Electrical properties in cure condition

Volume resistivity	As made	IEC 60464 EEIZ-WI/RD 05.058	$1.7x10^{17}$ Ω · m
Surface resistivity	As made	IEC 60464 EEIZ-WI/RD 05.058	$1.5x10^{15}$ Ω
Dielectrical strength	As made	IEC 60464 EEIZ-WI/RD 05.037	›100 MV/m
	24h in water		›90 MV/m

Thermal Classification as per UL1446

	Basecoat	Overcoat	NEMA	TI
Twisted Pair	Polyester	Polyamide	MW76	155
Helical Coil	Polyester	Polyamide	MW76	200
Twisted Coil	Polyester	Polyamide-imide	MW35	180
Helical Coil	Polyester	Polyamide-imide	MW35	200
Twisted Pair	Solderable PE	/	MW26	155
Helical Coil	Solderable PE	/	MW26	155
Twisted Coil	Polyurethane	Polyamide	MW28	130
Helical Coil	Polyurethane	Polyamide	MW28	130