

DuPont™ Voltatex® 7400

TECHNICAL DATA SHEET

Chemical base: THEIC- modified polyesterimide

Voltatex® 7400 represents a class of magnet wire enamel based on THEIC-modified polyesterimide with good flexibility and excellent adherence with different solid contents such as Voltatex® 7437.

Voltatex® 7400 is specially designed preferably for the enamelling of rectangular but also of heavy round conductors. Voltatex® 7400 shows good edge covering when applied on strip magnet wire.

An application combined with a polyamideimide based topcoat in N-methylpyrrolidone solvent e.g. Voltatex® 8200 or Voltatex® 8300 is possible.

Enamelling technology

Voltatex® 7400 can be applied on both rectangular and round wires in diameter range from approx. 0.50 mm up to approx. 5.00 mm single and heavy build by convection or recirculating air ovens preferably on vertical machines.

The enamel is usually applied by dies.

Voltatex® 7400 can be supplied at different viscosities and solid contents as listed below in table 1 to fulfil specific machine and application requirements.

Table 1: Standard parameters

	Voltatex® 7437
solid content (1g, 1h, 180 °C)	37 % ± 1 %
viscosity at 25 °C DIN 53015	550 mPa·s ± 100 mPa·s
diluent	Voltatex® 9968

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Table 2: Enamelling conditions

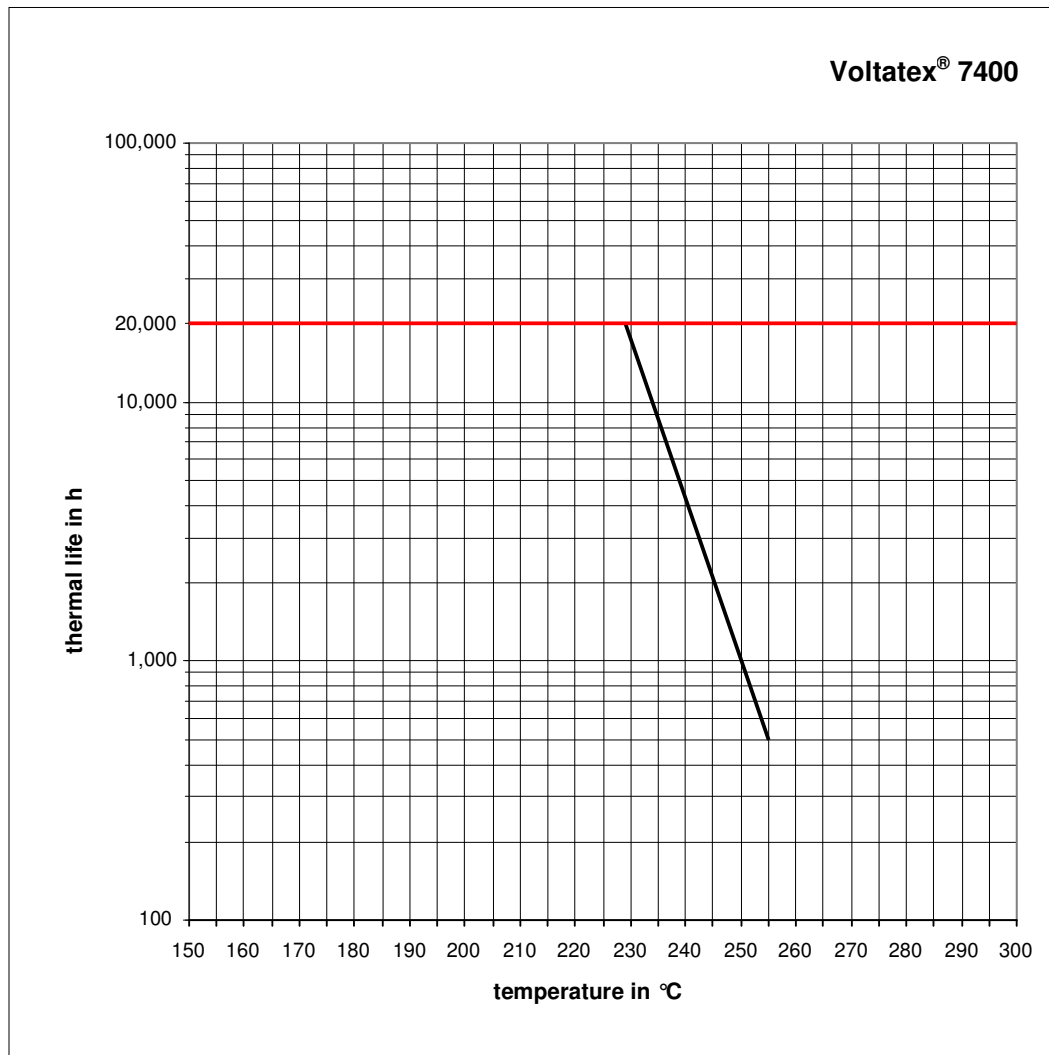
	Voltatex® 7437
wire enamel	
recirculating air oven	8 m, vertikal
application	dies, 8 passes
oven temperature	550 °C
conductor diameter	1.3 mm
enamelling speed	35 m/min
increase in diameter	75 µm

Table 3: Test results

flexibility and adherence, mandrel test 1 x d with pre-stretching of	15 %
heat shock: 1xd, 30 min., 2xd, 30 min.	180 °C 200 °C
cut-through temperature: tested	360 °C
peel test	220
resistance to solvents, given as pencil hardness: as delivered IEC standard solvent DuPont™ Voltatex® impregnating varnishes DuPont™ Voltatex® UP-impregnating resins DuPont™ Voltatex® EP-impregnating resins	3- 4H 3- 4H 3- 4H 3- 4H 3- 4H
dissipation factor tan δ-intersection point	190 °C
temperature index acc. to ASTM D 2307, 20,000 h value (figure 1)	TI/229

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