

DuPont™ Voltatex® 8300

TECHNICAL DATA SHEET

Chemical base: Polyamideimide

Voltatex® 8300 represents a class of magnet wire enamel based on a polyamideimide resin with different solid contents such as Voltatex® 8327. Voltatex® 8300 is mainly used as a topcoat in combination with a polyester or polyesterimide basecoat to improve the mechanical, chemical and thermal properties. For special purposes it can also be applied as a single coat even on rectangular conductors showing outstanding cut-through, heat shock and abrasion properties.

The application range comprises rectangular and e.g. heavy round conductors to be reshaped.

Enamelling technology

Voltatex® 8300 can be applied in a wire diameter range from approx. 0.50 mm up to approx. 5.00 mm, as well as on rectangular conductors in single and heavy build by convection and recirculating air ovens, both horizontal and vertical types.

Voltatex® 8300 is dissolved in NMP (= N-methylpyrrolidon) and is not compatible with cresylic acid containing diluents or enamels. When used Voltatex® 8300 as an overcoat in combination with a conventional basecoat it must be carefully avoided that both enamels get in contact, because of incompatibility.

Table 1: Standard parameters

	Voltatex® 8327
solid content (1g, 1h, 180 °C)	27 % ± 1 %
viscosity at 25 °C DIN 53015	2,200 mPa·s – 2,500 mPa·s
diluent	Voltatex® 9935

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Table 2: Enamelling conditions

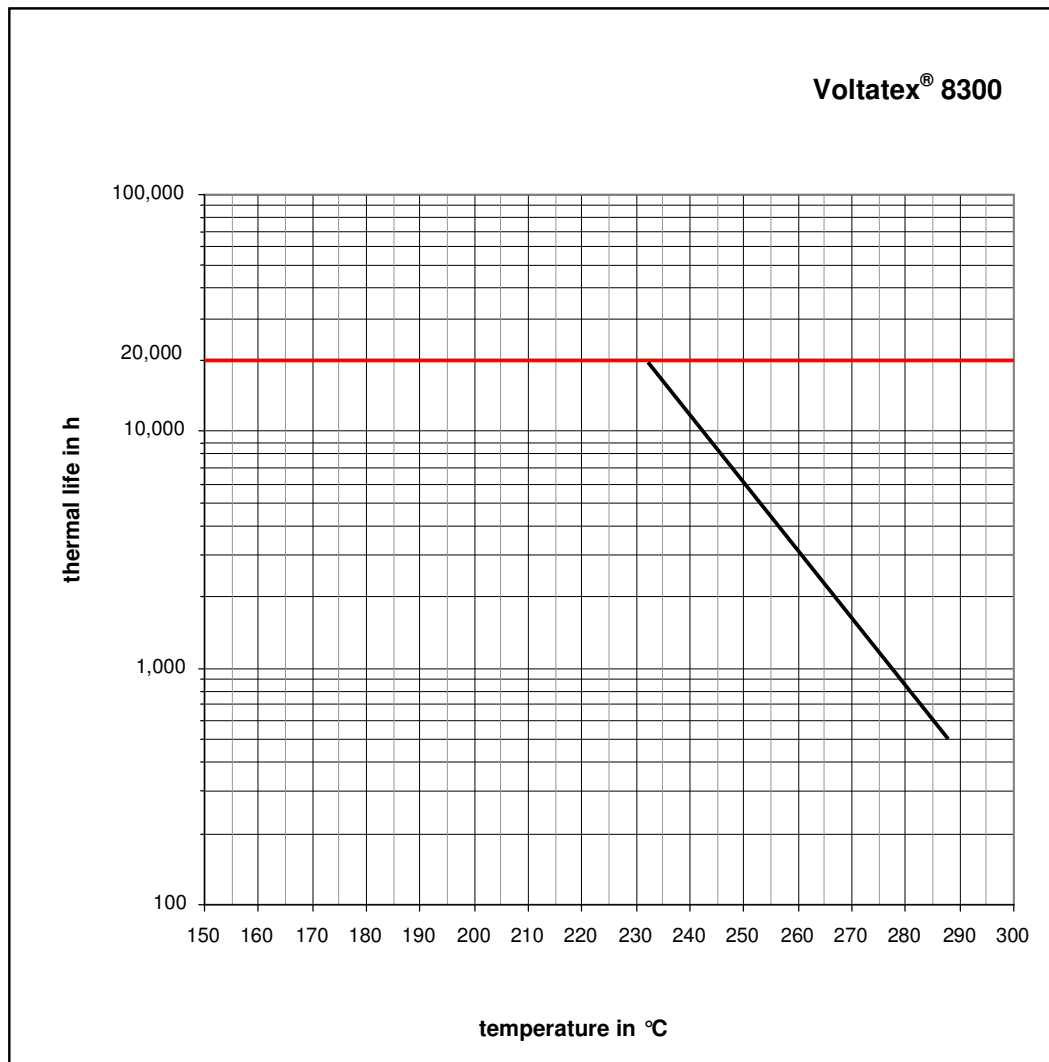
wire enamel	Voltatex® 8327
recirculating air oven	8 m, vertical
application	dies, 8 passes
oven temperature	550 °C
conductor diameter	1.0 mm
enamelling speed	45 m/min
increase in diameter	67 µm

Table 3: Test results

flexibility and adherence, mandrel test 1 x d with pre-stretching of	25 %
heat shock: 1xd, 30 min.	300 °C
cut-through temperature: measured	380 °C
NEMA scrape resistance: number of strokes	435
resistance to solvents, given as pencil hardness:	
as delivered	5- 6 H
IEC standard solvent	5- 6 H
DuPont™ Voltatex® impregnating varnishes	5- 6 H
DuPont™ Voltatex® UP-impregnating resins	5- 6 H
DuPont™ Voltatex® EP-impregnating resins	5- 6 H
dissipation factor tan δ-intersection point	250 °C
temperature index acc. to ASTM D 2307, 20,000 h value (figure 1)	TI/232

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Contact:

DuPont Performance Coatings GmbH
Voltatex® Technical Service
Christbusch 25
42285 Wuppertal
Germany

Phone: +49 202 529-2675 / -2335 / -2387
Fax: +49 202 529-2821
e-mail: Voltatex@dupont.com

www.Voltatex.dupont.com

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