

# DuPont™ Voltatex® 8200

## TECHNICAL DATA SHEET

### Chemical base: Polyamideimide

Voltatex® 8200 represents a class of magnet wire enamel based on a polyamideimide resin with different solid contents such as Voltatex® 8227. Voltatex® 8200 is mainly used as a topcoat in combination with a polyester or polyesterimide basecoat to improve the mechanical, chemical and thermal properties.

For special applications it can be applied as a single coat showing outstanding cut-through, heat shock and abrasion properties.

Voltatex® 8200 is also available with integrated lubricant as Voltatex® 8200 SL.

### Enamelling technology

Voltatex® 8200 can be applied in a wire diameter range from approx. 0.02 mm up to approx. 1.80 mm, single and heavy build by convection and recirculating air ovens, both horizontal and vertical types.

The enamel can be applied with dies or felt.

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

Voltatex® 8200 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® 8227
solid content (1g, 1h, 180 °C)	27 % ± 1 %
viscosity at 25 °C DIN 53015	1,800 mPa·s – 2,200 mPa·s
diluent	Voltatex® 9935

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**Table 2: Enamelling conditions**

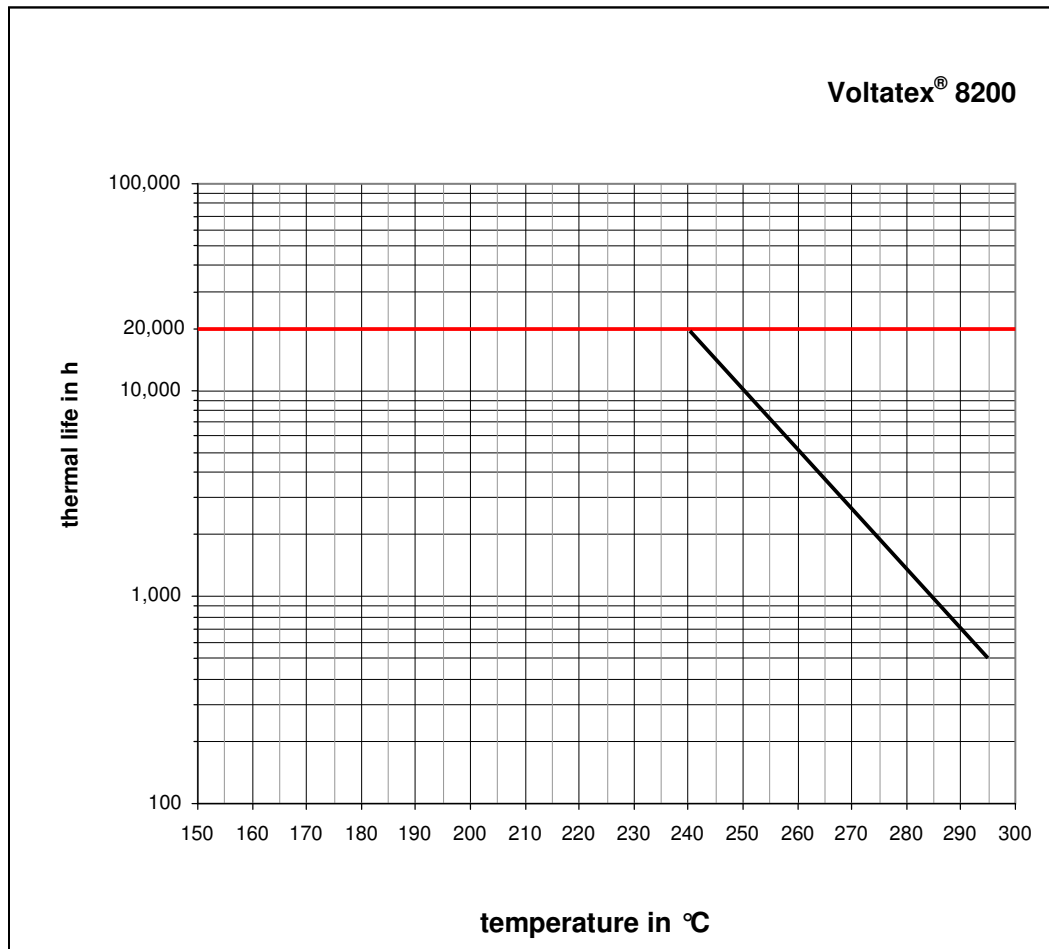
wire enamel	Voltatex® 8227
recirculating air oven	8 m, vertikal
application	dies, 8 passes
oven temperature	550 °C
conductor diameter	1.0 mm
enamelling speed	45 m/min
increase in diameter	60 µm

**Table 3: Test results**

flexibility and adherence, mandrel test 1 x d with pre-stretching of	15 %
heat shock: 1xd, 30 min.	300 °C
cut- through temperature: measured	445 °C
NEMA scrape resistance: number of strokes	380
resistance to solvents, given as pencil hardness:	
as delivered	7- 8 H
IEC standard solvent	7- 8 H
DuPont™ Voltatex® impregnating varnishes	7- 8 H
DuPont™ Voltatex® UP-impregnating resins	7- 8 H
DuPont™ Voltatex® EP-impregnating resins	7- 8 H
dissipation factor tan δ-intersection point	270 °C
temperature index acc. to ASTM D 2307, 20,000 h value (figure 1)	TI/240

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