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## SHBond® WD210 Glide

- Enamelled round copper wire, thermoresistant, selfbonding and self lubricating
- Insulated with THEIC mod. polyesterimide
- plus polyamide-imide overcoat plus bonding layer
- Class 200

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## Attributes

SHBond® WD210 Glide is a highly thermoresistant self-bonding enamelled copper wire of heat performance class N. With this wire the excellent resistance and insulation properties of SHTherm® 210 – Dualcoat are combined with the special application possibilities of an additional bonding layer which is based on mod. aromat. polyamide and which enables the production of heat bonded wire windings. Using this type of thermo-setting wire the heat bonding process is economic, as it can be executed within seconds and can support automatic processing. It is not harmful to the environment. Heat bonded windings show excellent thermal and mechanical stability and high resistance to climatic demands and many chemical agents. Sophisticated process technology and process setting ensure easy mouldability, good elongation and excellent insulation properties.

The final layer of varnish serves the purpose of providing a superior gliding surface, giving the wire excellent windability features at higher speeds, and enabling a higher filling factor plus reduced soiling of the winding machines. The reduced coefficient of friction helps to avoid damage to the wire during winding and thus maintains the insulation properties of the wire.

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## Application

Drives for household appliances, pole windings, wire wound coils, power tools

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## Standards

IEC / DIN EN 60317-38

NEMA MW 102-C

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## Delivery forms

Grade 1: on request

Grade 2: on request

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Updated 06/18



Typical properties of enamelled round copper wire 0.500 mm, with insulation film grade 1B

Mechanical	Unit of measure	Set value	Actual value (typ.)
Overall diameter	mm	min. 0.541 - max. 0.568	as set value
Bare wire diameter	mm	0.495-0.505	as set value
Adhesion (no cracks in film after winding)		mandrel diameter 0.500 mm	1 x d / 10 % pre-elongation
Scrape resistance	N	≥ 3.950	≥ 7.500
Pencil hardness		H	3H - 5H
Elongation at break	%	≥ 28	≥ 38
Coefficient of friction	μ	/	≤ 0.110

Thermal	Unit of measure	Set value	Actual value (typ.)
Temperature index TI	°C	200	210
Cut through temperature (pre-heated block)	°C	320	≥ 360
Dielectric loss factor (bending point)	(°C) (tan δ)	/	≥ 140/185/240
Heat shock at 220 °C (no cracks in varnish coat after winding)		mandrel diameter 1.120 mm	1 x d / 10 % pre-elongation
Bonding temperature	°C	200 +/-2	≥ 210

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Electrical	Unit of measure	Set value	Actual value (typ.)
Dielectrical strength at RT	kV	$\geq 2.4$ (twist)	$\geq 3$ (cylinder)
High voltage discontinuities 750V		$\leq 10$ on 30 m	$\leq 7$ on 100 m
Electrical conductivity	MS/m	58 - 59	$\geq 58.5$

Chemical	Set value	Actual value (typ.)
Pencil hardness (storage in standard solvent ½ h / 60 °C)	test methods unsuitable	/
Pencil hardness (storage in alcohol ½ h / 60 °C)	/	
Resistance to commercial impregnants^(1)	/	not applicable
Resistance to commercial refrigerants^(1)	/	limited
Resistance to commercial dry transformer oils^(1)	/	not recommended
Resistance to commercial hydraulic oils^(1)	/	no

(1) Due to the variety of individual applications we cannot make any generally binding commitments regarding the compatibility. We recommend testing compatibility with the materials being used.