



INSULATION COATING OF MAGNET WIRES

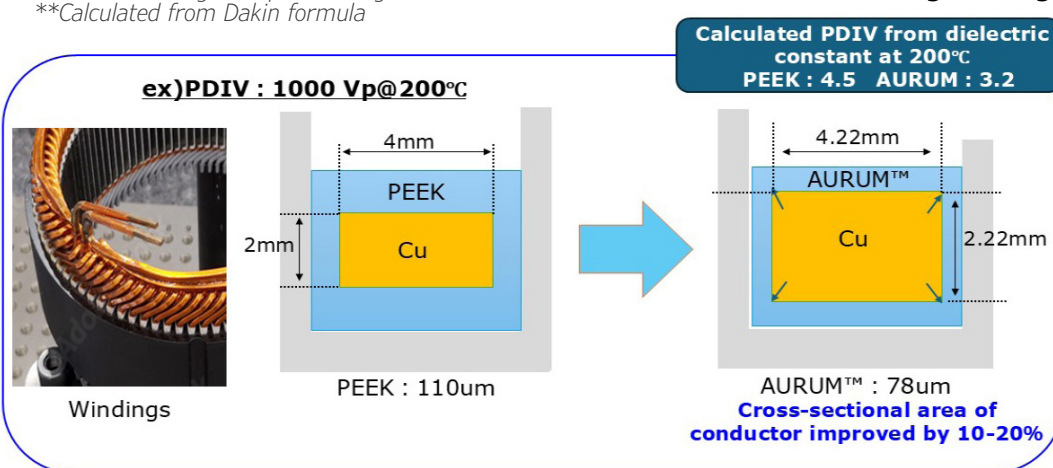
For Motors Running at High-temperatures

Challenges	Our Solution – AURUM®
Achieve High power density	Thermoplastic Polyimide with a $T_g = 473^\circ\text{F}$
Lower cost per kW	Outperforms PEEK, PAI, and other materials
Charging time reduction	Excellent thermal stability
Lighter and efficient EVs	Low heat generation
Replacing 400V by 800V+ systems	Increased copper fill factor
Thinner and lighter cabling systems	Reduced material usage
High-end insulating material	Excellent heat dissipation to stators

Property	Unit	AURUM™ PL450C	PEEK 450G	PAI Catalog Data	Epoxy
Coating Process		Extrusion	Extrusion	Dipping	Dipping
Tg/Tm	°C	245/388	143/343	275 / -	~200 / -
Breakdown Voltage	23°C	28	21	24	-
	180°C				
Dielectric Constant	1kHz,	3.3	3.2	4.0~4.6	3.4~4.4 (1GHz)
	200°C				
PDIV* 100umt, 200°C	Vp	(1,100)**	(960)**	(990)**	-

* Partial discharge inception voltage
** Calculated from Dakin formula

25% thinner thickness or 15% high voltage



HIGH DIELECTRIC STENGTH
LOW DIELECTRIC CONSTANT

HIGH ELASTICITY
LOW SHRINKAGE FACTOR

HIGH PV LEVEL RESISTANCE
LOW WEAR FACTOR

AURUM EXTRUSION COATING PROCESS -

*Recommendation

