


# Advanced nanoGUARD

Non-toxic, environmentally friendly, fluorine-free replacement for fluorinated polymer electronic coatings

		FLURO-POLYMERS	TRADITIONAL CONFORMAL COATING	VAPOR DEPOSITION
<b>REQUIREMENTS</b>				
FULL PROTECTION	Passes OEM req.; undercoats	Masking; limited undercoat	Not 100%; no undercoat; masking	No UV dye; QC challenge
CONDENSATION / IMMERSION	Up to IPX8	Comparable to actnano	Not 100%	Not 100%
TOTAL COST	Lowest overall cost	PCBA cleaning required; masking	Masking; cure and difficult to rework	Expensive equipment; batch; mask; can't rework
SUSTAINABILITY/ HUMAN HEALTH	Non-toxic; fluorine-free; no forever chemicals	Contains PFAS; hazardous forever chemicals	Toxic chemicals	Harsh chemicals
OPERATING TEMP	-40 to 200 °C	Typical max +175 °C	Cracking and bubbling	Comparable to actnano
CURING	No curing required	No curing required	Thermal or UV cure process	No curing, Long process
THERMAL NEUTRALITY	Similar to non-coated	Comparable to actnano	Major heat entrapment; CTE concerns	Non-thermal neutral
MASKING	None; entire board 3D coverage	Limited	Masking required	Masking required
DESIGN CONSTRAINTS	No impact on design	Comparable to actnano	Not flexible; cracks	Comparable to actnano
CONNECT THROUGH	Gel-state connect through	Limited	Not feasible	Not feasible

