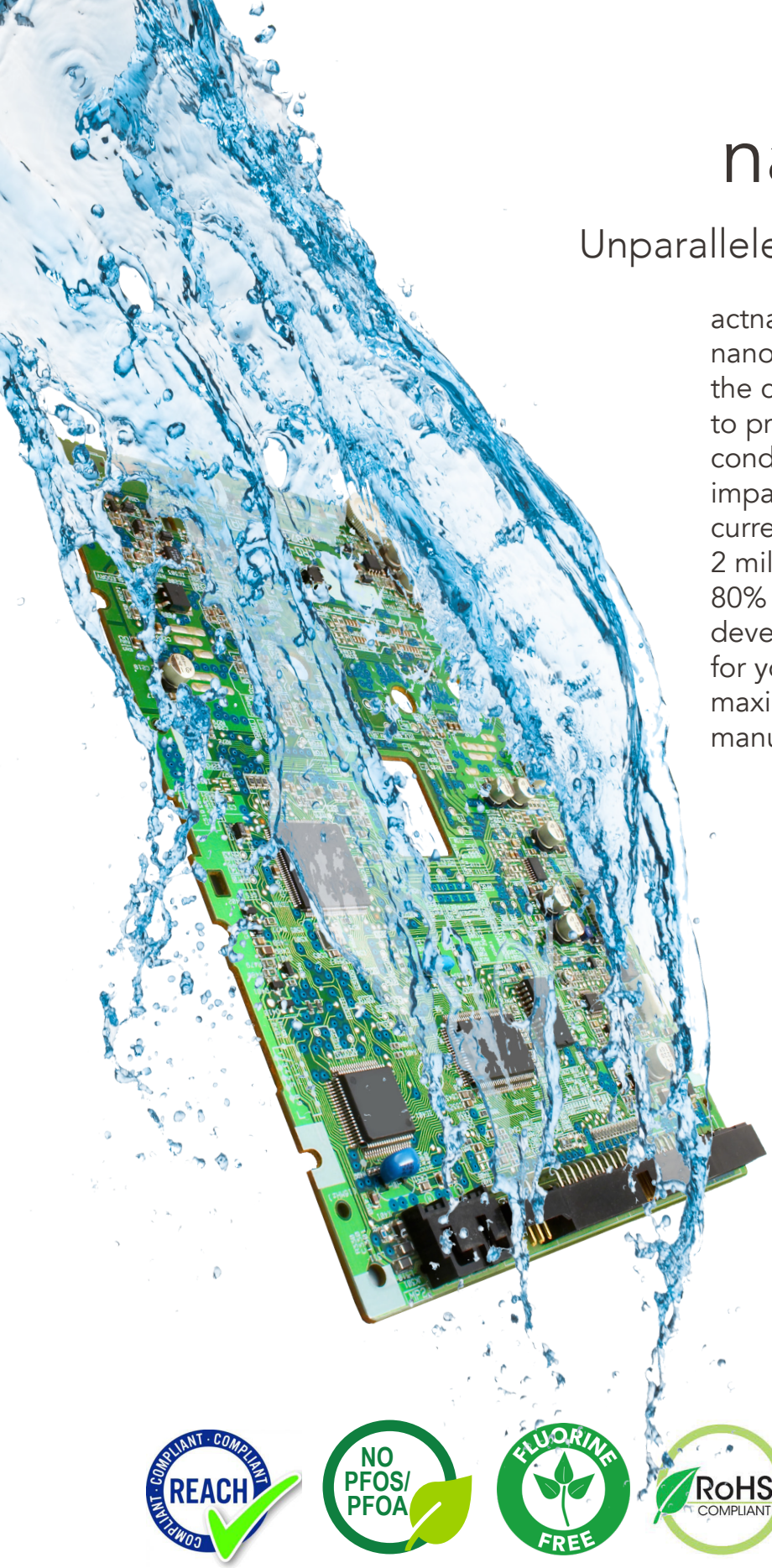

nanoGUARD

Unparalleled Automotive PCBA Protection

actnano's revolutionary Advanced nanoGUARD™ technology is disrupting the coatings industry with its unique ability to protect 100% of PCBA electronics from condensation, humidity, and salt without impacting signal integrity. nanoGUARD is currently protecting electronics on over 2 million production vehicles, including 80% of EVs in North America. Let us develop a custom, 3D protection solution for your complex systems providing maximum coverage while also increasing manufacturing efficiency.

- Coat connectors and antennas
- Undercoat raised components
- Waterproofs IPx7+
- Fluorine Free
- Connect-thru technology, no masking required
- Protects from liquids, condensation, humidity, salt
- Withstands -40° C to 200° C
- Maintain high speed signal integrity
- Use existing automated spray equipment
- Easy rework
- 100% safe materials
- Lightweight
- No touch transfer
- Ready to assemble within 30 seconds

COMPLIANT · COMPLIANT REACH

NO PFOS/ PFOA

FLUORINE FREE

RoHS COMPLIANT

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An Innovative Surface Protection Technology that Outperforms Traditional Coatings & Seals

		MECHANICAL SEALS	TRADITIONAL CONFORMAL COATING	VAPOR DEPOSITION
REQUIREMENTS				
FULL PROTECTION	Passes OEM req.; undercoats	UV, moisture & drop; condensation	Not 100%; no undercoat; masking	No UV dye; QC challenge
CONDENSATION / IMMERSION	Up to IPX8	Cracking issues	Not 100%	Not 100%
TOTAL COST	Lowest overall cost	Adds weight, material, SKUs and assembly steps	Masking; cure and difficult to rework	Expensive equipment; batch; mask; can't rework
SUSTAINABILITY	Lightweight; Fluorine-free	Weight decreases EV range	Fluorine/VOC	Harsh chemicals
OPERATING TEMP	-40° to 200° C	Comparable to actnano	Cracking and bubbling	Comparable to actnano
RF ATTENUATION	Negligible, including 5G	No RF Interference	Significant	Thin, but not RF neutral
THERMAL NEUTRALITY	Similar to non-coated	Casing heat entrapment	Major heat entrapment; CTE concerns	Non-thermal neutral
MASKING	None; entire board 3D coverage	Not needed	Masking required	Masking required
DESIGN CONSTRAINTS	No impact on design	Limited to rigid	Not flexible; cracks	Comparable to actnano
WEIGHT	Negligible	Multiple grams +	Comparable; higher thickness	Comparable to actnano

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