

# nanoGUARD

## Unparalleled PCBA Protection

Advanced nanoGUARD™ coatings provide critical electronics applications with 3D protection from harsh electrical and environmental conditions.

actnano's proven nanoGUARD technology delivers unsurpassed performance, reliability and manufacturing efficiencies without compromise.

### 100% 3D coverage with nanoGUARD viscoelastic, gel-state material

- Horizontal and vertical surfaces
- Undercoat large components (BGAs, etc)
- Use on rigid or flexible substrates
- No cracking or bubbling

### Waterproof exceeding IPX7/8+

- Protection from liquids, condensation, humidity, salt and more

### Proven connect through coating capability

- No/minimal masking required
- Coat connectors and contacts
- Maintain high speed signal integrity connections

### Coat heat sinks and antennas

- No RF influence
- Negligible thermal impact

### Lowest total solution cost

- In-line processing, no cure time deposition
- No ovens or other curing required
- Use existing or standard equipment
- Typically, ready within 30-60 seconds
- Easy board rework and repair

### Meets a broad list of environmental certifications and industry requirements

- UL94 V-0 and UL94 5VA flammability rating
- 100% safe materials
- Lower manufacturing carbon footprint



[www.actnano.com](http://www.actnano.com)

# nanoGUARD is electronics' best defense against harsh electrical and environmental conditions



## PROVEN PERFORMANCE

### Water protection:

IPX7/IPX8+

### Humidity:

85C @ 95% RH @ 1,000 hours

### Thermal Shock:

125 C/-40 C 1,000 cycles

### Salt fog:

24-hr 72-hr, 96-hr, 200-hr  
under 48V

### Multiple chemical/fluid tests

### Vibration testing

### Submersion:

Water – 1 meter, 30 minutes

Saltwater (3.5% NaCL)  
– 15 hours

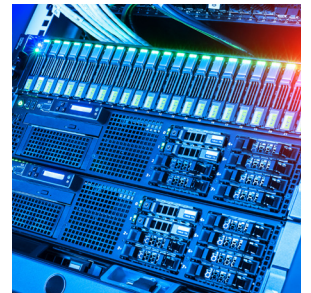
Soap water (1% soap solution)  
– 15 hours

### RF:

No signal attenuation up to 60 GHz  
(exceeds 5G standard frequencies)

### Electrical Contact:

No change within measurable  
tolerance after mating



## PROCESS ADVANTAGE

- Use existing equipment
- No ovens or other curing equipment required
- No masking or demasking
- Coat directly over connectors and contacts
- Fast ambient cure
- Undercoat raised components
- Withstands touching
- Easy and fast rework

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