



Aero Marine Engineering Technicoat

Specification of Corrosion Protection
Properties in Specific Exposure Conditions



100%
green
footprint



100%
water
based



100%
pure
quality

Lifetime Value for HVAC&R Equipment

In partnership with Aqua Aero, Aero Marine Engineering delivers industry-leading coating solutions specifically designed for heat exchange equipment. Leveraging over 20 years of experience in the HVAC&R coating business, Aqua Aero ensures long-term protection with top-tier products, offering exceptional value throughout the equipment's lifetime. This specification recommendation describes the resistance of aluminum fins of heat exchangers in various exposures. Additional parts of heat exchanging equipment that are manufactured from various metals or substrates, may require additional accelerated tests and coating protection layers.

BENEFITS

Anti-corrosion Properties

Extreme-Tier and High-Tier 20.000 hours, Mid-Tier 15.000 hours, and on request Smart-Tier 6.000 hours.

Antimicrobial Properties

To protect the coating layer, Aqua Aero coatings can be modified to achieve >99.9% reduction of a wide range of noxious micro organism. Reports are available upon request.

Various Other Functionalities

Aqua Aero coatings can be customized for a range of additional properties, including hydrophilicity, hydrophobicity, scratch resistance, reflection and gloss levels, smoothness, dirt repellence, and heat rejection.

FEATURES



Eco-friendly

Aqua Aero water-based products help reduce carbon footprint without compromising quality, with the lowest VOC release in the industry.



Specification Services

The R&D department is dedicated to designing coating functionalities that meet your specific requirements. Contact for more details.



Resistance Lists

Aqua Aero coatings are designed to withstand specified minimum chemical exposures in the air. These exposures are detailed in our Chemical Resistance lists, which are available upon request. Please consult these lists if high chemical concentrations are anticipated.



Reporting

All specific properties are audited and reported according to relevant ASTM, ISO, DIN, or other internationally accepted standards. Reports are available upon request; please refer to the specified report reference.



Product Specification Sheet

AA coating systems are described in the Product Specification Sheets, which can be used in the project descriptions.

OUR STANDARD LIMITED WARRANTY

To all Aqua Aero applied coating services, the following standard warranty is recommended to the Aqua Aero applicators: The Aqua Aero Warranty is valid for a period up to ten (10) years for coil coatings, and cabinet/component coatings, from the coating application date. The exclusive remedy for the breach of this Warranty is limited, at the applicator's sole discretion, to repair the coating in the field or to a new coating application, or the value of the coil or cabinet that needs to be replaced, excluding installation costs. Typical warranty conditions are subject to maintenance requirements.

Aqua Aero HVAC&R coatings are the solution you need for reliable protection against corrosion in Mid-Tier, High-Tier, and Extreme-Tier corrosive conditions.

Aqua Aero provides unmatched durability & performance.

HVAC&R INDUSTRY STANDARDS

- ✓ Mid-Tier
15.000 Salt Spray Hours
- ✓ High-Tier
20.000 Salt Spray Hours
- ✓ SWAAT > 5.000 Hours
- ✓ UV A, B, C 1.000 Hours
- ✓ Minimal Gloss Loss
after Salt Spray (86°)
- ✓ H₂S Tested
- ✓ FDA Compliant
- ✓ PROP 65 Compliant
- ✓ REACH ROHS Compliant
- ✓ No ESH Off Gas
- ✓ Long Term Warranty
- ✓ C5 - M Approved
- ✓ UL 723 Fire and Smoke
Highest Ranking

SELECTION MATRIX

Location C3 – C4	Mid-Tier Protection
> 0,31 miles from Seaside > 0,31 miles from Industry	
Location C5	High-Tier Protection
< 0,31 miles from Seaside < 0,31 miles from Industry Urban Location	
Location C5 - M	Extreme-Tier Protection
Airports Beachfront Refinery Off Shore Waste Water Treatment High Exposure Industry Oil Processing Industry	

BEYOND THE STANDARDS

	Aqua Aero High-Tier	Aqua Aero Mid-Tier	Modine Insitu	Blygold Polual XT	E-Coat
	<i>50-75 µm 2-3 mil</i>	<i>30 µm 1,2 mil</i>	<i>up to 30 µm 1,2 mil</i>	<i>25 µm 1 mil</i>	<i>50 µm incl top layer</i>
Neutral SST ASTM B117	20.000 hrs	15.000 hrs	> 15.000 hrs	11.000 hrs	15.000 hrs
ASTM G85 Annex 3 (SWAAT)	+ 5.000 hrs	> 3.956 hrs	2.400 hrs	—	> 3.000 hrs
Ozone Cycle Exchange ISO 20340	> 1.000 hrs	> 1.000 hrs	—	—	4.200 hrs
Taber Abraser ASTM D4060	> 500 cycles	> 500 cycles	—	—	—
Temperature Ranges	-40°F to 482°F	-40°F to 482°F	68°F - 302°F	—	104°F - 325.4°F
Adhesion D3359 to Alu & Cu	G0/5B	G0/5B	5B	5B	5B
Pencil Hardness	HB	HB	HB	—	2H
FDA Compliant (21 CFR 175.300)	✓	✓	—	—	—
Sulphuric H ₂ S Test	✓	✓	—	—	—
Flexibility Test ISO 1519	✓	✓	✓	—	—
Impact lbs 100/sq inch ASTM D2794	✓	✓	Pass 160#	—	160 lb/sqft
Immersion D870-92 1.000 hours	✓	✓	1.000 hrs	✓	✓
Flamespread and Smoke Index ASTM E84	✓	✓	—	—	—
Antimicrobial ISO 22196-7	✓	✓	—	—	—
UV A, C Resistance ISO-16474	1.000 hrs	1.000 hrs	1.000 hrs D4587 2.000 hrs G155	"Excellent" (no test report)	500 hrs
VOC Content	4.00 oz/gal	0- 4.00 oz/gal	5.20 oz/gal	> 53.45 oz/gal	Topcoat 36 oz/gal
Capacity Test Coating	Negligible (BRE test report)	—	< 1% (no test report)	0 - 3%	< 1%

All information has been distracted from TDS published on the internet Jan 2025.

Aero Marine Engineering, Inc.

USA

P.O. Box 189

708 W. Dempsey (Hwy 380)

Bryson, Texas 76427

Phone: 940-392-3333

contact@ame-technicoat.com

office@ame-technicoat.com

Technical Inquiries

info@aquaaero.net