

AkzoNobel Aerospace Coatings

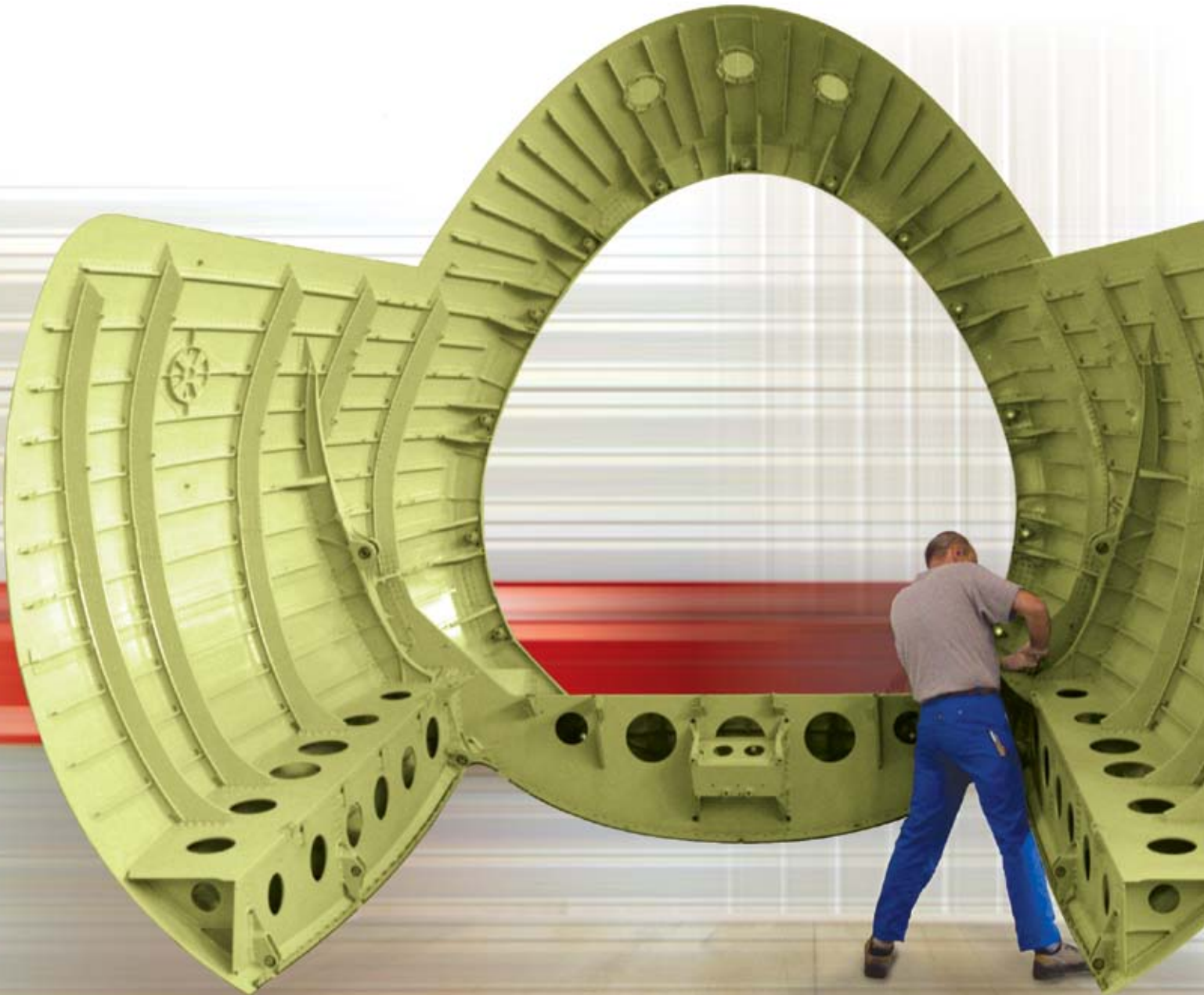
Aerowave[®] Series

Next generation structural waterborne coatings



AkzoNobel

Tomorrow's Answers Today



Most of the internal, structural parts of an aircraft are sealed into areas of the structure that will never be accessed again during the life of the airframe which can be as long as 30 years. As such, the materials used to protect these parts need to have exceptional chemical and corrosion resistance along with flexibility to ensure the integrity of the paint film as the aircraft flexes during flight.



The next generation Aerowave® Series of Structural Waterborne Coatings provides these features along with optimal process/application time for OEM's (Original Equipment Manufacturers) while simplifying the mixing process as well as providing the peace of mind that comes with a coating that can last more than 30 years.

For application on both metallic and composite components, the complete Aerowave® Series system includes:

- Primer
- Topcoat
- Pore-filler
- Putty-filler

OEM's, their sub-contractors, and ultimately their customers (aircraft owners/airlines) greatly benefit from the Aerowave® Series next generation of Structural Waterborne Coatings.

OEM's and sub-contractors

Reduce process times and costs with:

- Optimized curing time
- Reduced waste
- Consistent quality
- Simplified mixing

Airlines/aircraft owners

- Reduced dry film weight
 - A reduced film weight and increased industrial opacity allow for the opportunity of applying less material, which can reduce aircraft weight and, in turn, fuel consumption
- Increased durability
 - Less frequent repairs
 - Reduces AOG time overall

Optimized film formation (Coalescence)

Obtain better adhesion no matter what new substrate or pre-treatment.

- Better substrate wetting properties
- Good layer thickness control
- Better adhesion & flexibility
- Compatible with new substrates & pre-treatments
 - Chrome-free chemical conversion coating
 - Chrome-free anodizing process
- Consistent film properties during pot life
- Less sensitive to substrate contamination

Optimized application

- Compatible with all conventional, plural, and next generation spray equipment
- Compatible with waterborne electrostatic spray equipment
- Required layer thickness for some OEM's only 15-20 μm (45-60 μm wet)
- One closed layer at low film thickness
- Clean-up with water and/or solvent
- Excellent application performance in high/low temperatures/humidity
- Exceptional sag resistance

Optimized curing

- Fast curing at ambient conditions
- Dry to dust: 30-60 minutes (23°C, 73°F)*
- Dry to recoat: 60-120 minutes (23°C, 73°F)*
- Fast forced cure properties; chemical resistant
 - 5 minute flash-off time, 30 minutes at object temperature of 60°C, 140°F*
 - 5 minute flash-off time, 20 minutes at object temperature of 80°C, 176°F*
- Equal performance whether air-dried or force cured

*If optimal air movement is applied

Optimized pot life

- Less reaction during pot life due to independently stabilized base and hardener components
- Pot life up to 6 hours at ambient conditions
- Reduction of waste materials

The Aerowave® product range has been qualified by major aircraft manufacturers and sub-contractors. Complete, up-to-date specifications are available on request, or can be found at www.akzonobel.com/aerospace.

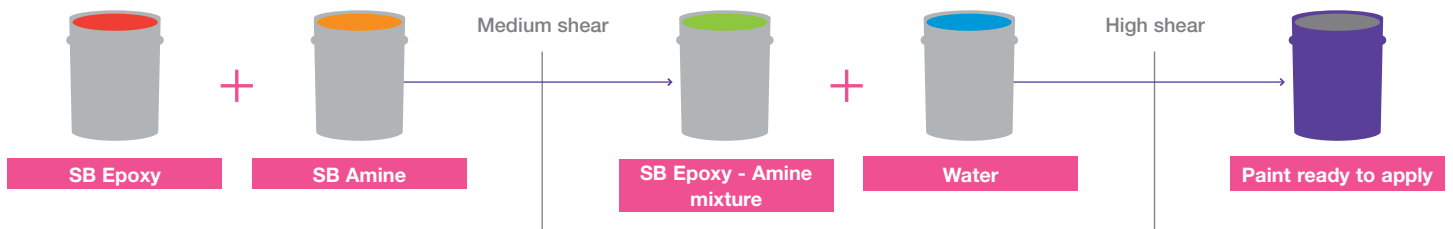


The next generation Aerowave® Series Structural Waterborne Coatings are formulated to optimize process/application time, waste, and coating weight.

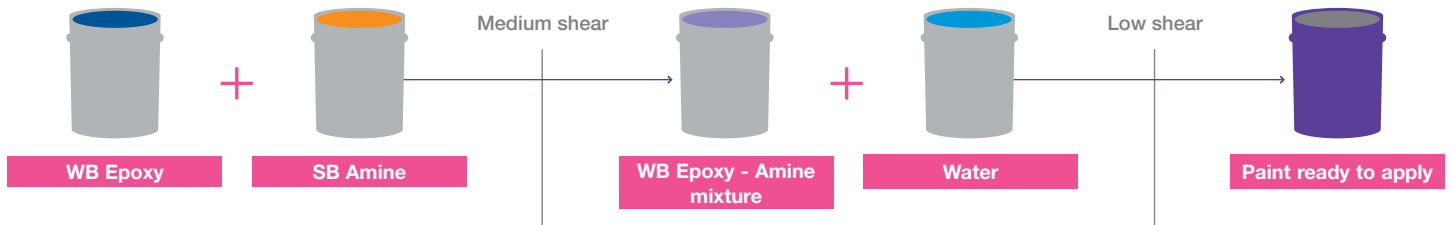
Reduced process/application time

Mixing preparation for first and second generation structural coatings is complicated, time-consuming, and can be expensive. Mixing at high and medium shears requires constant mechanical agitation. This means investing in special mixing equipment. Additionally, the products are difficult to mix in two component spray equipment. This can lead to poor film formation and film faults. Moving to Aerowave® Series Next Generation Structural Waterborne Coatings make mixing preparation easier with the ability to be mixed manually or automatically, a consistent quality with low or high shear mixing, a homogenous mixture during pot life, and only 2 components to mix versus 3 plus water with previous generation coatings.

First generation

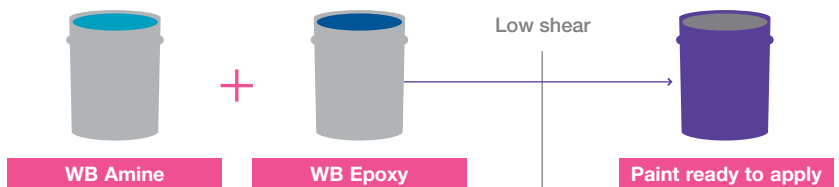


Second generation



Next generation

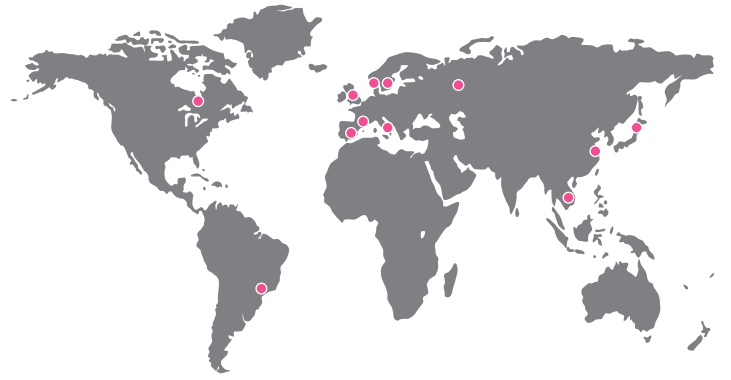
Aerowave® Series - Structural Waterborne Coatings



Optimized mixing properties

With former structural waterborne coatings it was difficult to mix the base and hardener components together, and to keep a homogenous mixture during potlife. The next generation Aerowave® Series has:

- Extremely consistent shelf life - no settlement
- The ability to be mixed manually or automatically (Plural mix spray equipment)
- Consistent quality with low or high shear mixing
- Homogenous mixture during pot life
- No need for additional water
- Only two-components vs. traditional three or four component products



Superior support

AkzoNobel Aerospace Coatings' various locations and vast number of distribution partners allow for fast delivery no matter where an aircraft is being built or repaired. High-quality technical support is also available for added convenience and peace of mind. To find out more about the next generation Aerowave® Series of Structural Waterborne Coatings, visit us on-line at www.akzonobel.com/aerospace or call your local AkzoNobel Aerospace Coatings representative.





System options

Aerowave® 2001 - Corrosion inhibiting primer for metallic and non-metallic substrates

Designed for metallic and non-metallic substrates, this is a waterborne, two-component, corrosion inhibiting, chromated, amine-cured epoxy primer. Aerowave® 2001 is easily mixed and applied, and provides an extremely durable and fast-curing primer finish.

Aerowave® 2002 - Non-corrosion inhibiting primer for composite substrates

Designed for composite substrates, this primer is a waterborne, two-component, non-corrosion inhibiting, chrome-free amine-cured epoxy. The primer provides a flexible, smooth surface with remarkable adhesion along with the ease of soap & water clean-up.

Aerowave® 2500 - Composite pore-filler

Aerowave® 2500 is the ideal pore-filler for composite substrates. This waterborne, non-corrosion inhibiting, chrome-free amine-cured epoxy filler is excellent for filling tiny pore holes in composite substrates, ultimately providing a smooth finish, ready for painting.

Aerowave® 2501 - Composite putty-filler

Designed for filling larger holes, gaps or cracks in composite substrates, Aerowave® 2501 is a solvent-free, ultra-high solids (>97%) putty-filler that aids in preparing an excellent, smooth surface ready for painting.

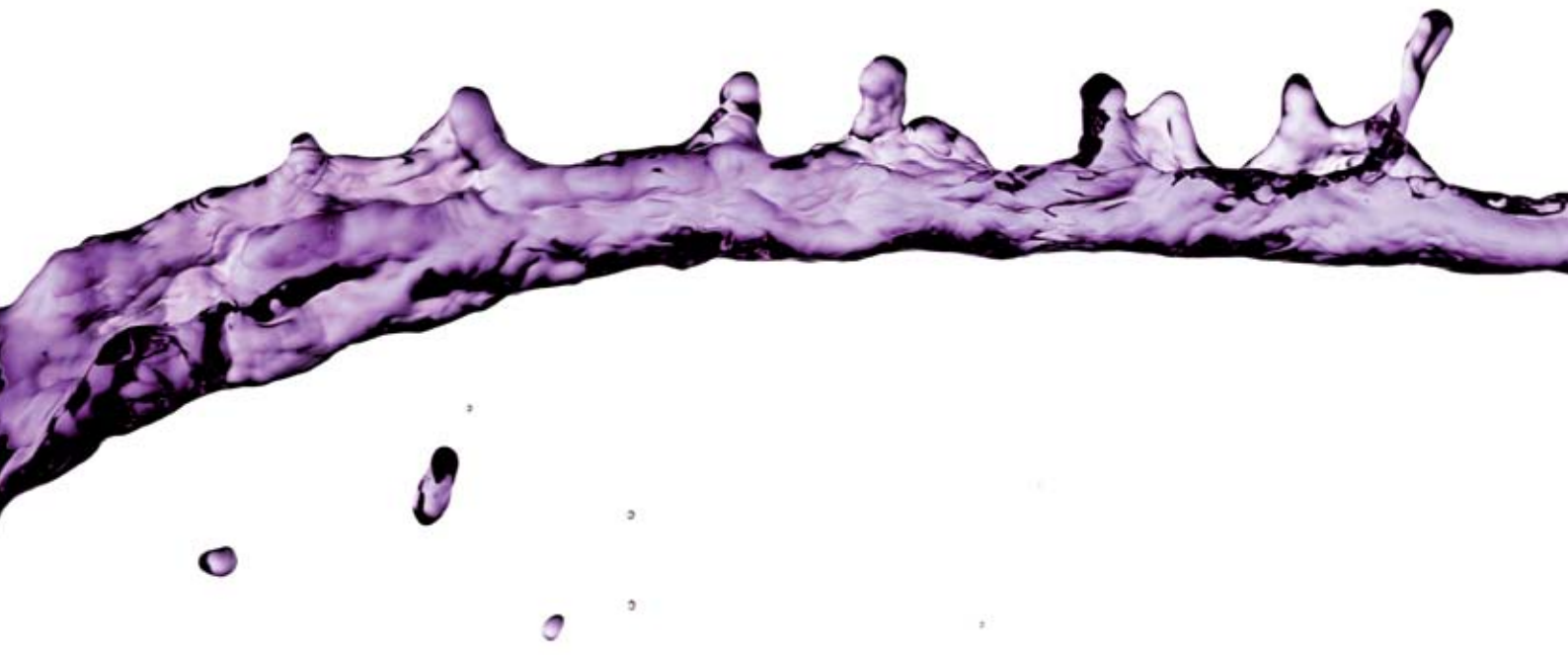
Aerowave® 3003 - Structural epoxy topcoat

As a topcoat for the interior structures of an aircraft, Aerowave® 3003 is a waterborne, two-component, chemical resistant amine-cured epoxy with good layer thickness control and a fast curing time no matter the method of curing.

Aerowave® 5001 - Structural and external military topcoat

Aerowave® 5001 is a two-component, waterborne polyurethane finish that is flexible and easy to mix. The product provides good substrate wetting properties along with exceptional sag resistance with a layer thickness of only 15-20 μm (45-50 μm wet).

Aerowave® Series Next Generation Structural Waterborne Coatings are designed to meet all of today's OEM structural maintenance requirements. The Aerowave® product range has been qualified by major aircraft manufacturers and sub-contractors. For complete, up-to-date specifications please go to our web site at www.akzonobel.com/aerospace



A better choice for the environment

Ease environmental concerns with the low VOC, waterborne choice that provides less application waste and the opportunity for less fuel consumption in service.

- Up to 75% less chromates
- Less waste
- Up to 20% less coating weight
 - Less weight on an aircraft = less fuel consumption
- Waterborne technology
 - Safer for the environment
 - Less organic solvent (VOC) emissions
 - Reduction of hazardous materials

Up to 20% less coating weight
Up to 75% less chromates
Waterborne technology



Brazil - São Paulo

Phone + 55 11 216 71818
Fax + 55 11 216 71754

China - Guangzhou

Phone + 86 20 8425 9662
Fax + 86 20 8442 3141

France - Toulouse

Phone + 33 5 34 60 48 00
Fax + 33 5 34 60 56 93

Germany - Hamburg

Phone + 49 40 5268380
Fax + 49 40 52683838

Italy - Rome

Phone + 39 06 977 494 11
Fax + 39 06 977 494 32

Japan - Tokyo

Phone + 81 3 52762050
Fax + 81 3 35110397

The Netherlands - Sassenheim

Phone + 31 71 3082905
Fax + 31 71 3082056

Russia - Moscow

Phone + 7 495 7950149
Fax + 7 495 9602972

Spain - Barcelona

Phone + 34 9 3374 1965
Fax + 34 9 3370 9663

Thailand - Bangkok

Phone + 66 2 984 5458
Fax + 66 2 984 5459

United Arab Emirates - Dubai

Phone + 971 4 347 2491
Fax + 971 4 347 2339

United Kingdom - Leicester

Phone + 44 11 62234123
Fax + 44 11 62234139

**United States - Waukegan,
Illinois**

Phone + 1 847 623 4200
Fax + 1 847 625 3332

**AkzoNobel**

Tomorrow's Answers Today

www.akzonobel.com/aerospace

We're the largest global paints and coatings company and a major producer of specialty chemicals. We supply industries worldwide with quality ingredients for life's essentials. We think about the future, but act in the present. We're passionate about developing sustainable answers for our customers. Based in Amsterdam, the Netherlands, we have 60,000 employees working in more than 80 countries - all committed to excellence and delivering Tomorrow's Answers Today.

© 2009 AkzoNobel NV. All rights reserved.
"Tomorrow's Answers Today" is a trademark of AkzoNobel NV.

AkzoNobel Aerospace Coatings
is an ISO 9001, ISO 14001 and
AS9100 certified company.