



TIODIZE

**Z-329**™

**WATER BASE • LOW VOC  
CORROSION INHIBITING  
COATING FOR ALUMINUM**



# Z-329™

## LOW VOC, NON-FLAMMABLE ANTI-CORROSION COATING

**Z-329** is a single component, water base coating formulated to inhibit corrosion. This hard film, water-dispersing coating is designed specifically for application on the interior and exterior surfaces of the fuselage, wing, empennage and other areas, where corrosion from water and condensation have been a traditional threat.

**Z-329** is a non-flammable, fast drying coating with excellent adhesion that penetrates to protect

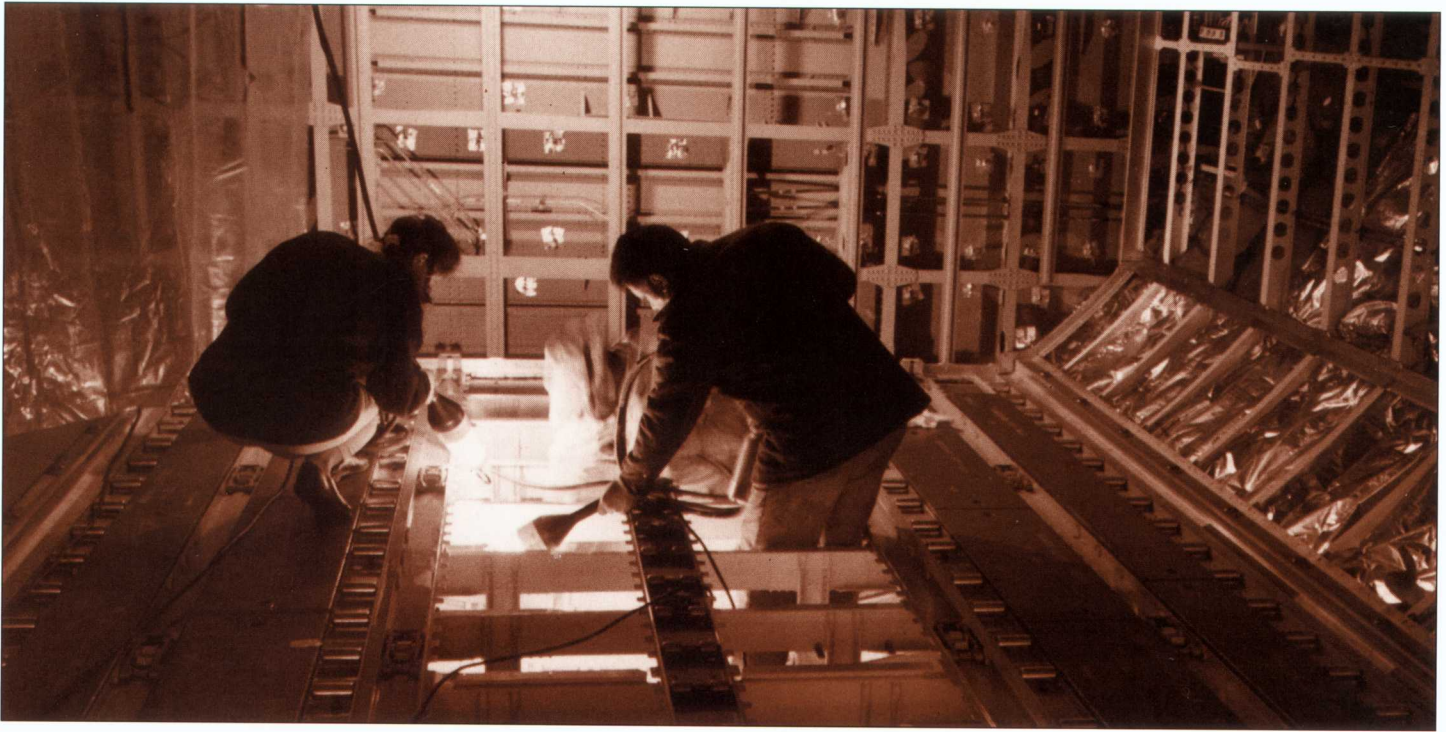
fasteners, joints and faying surfaces.

Unlike wax or oils, **Z-329** is environmentally safe and can be sprayed "on-line" with a high volume, low pressure spray unit, and without the need of a spray booth.

**Z-329** can be applied after all other customer finishes, specification primers, top coats and sealants have been applied and cured.

- **Z-329 IS APPROVED TO DMS 2414 (Ref. DAC Test Report No. 18415).  
Boeing Commercial Airplanes, Long Beach Division.**
- **Z-329 MEETS REQUIREMENTS OF BMS 3-29.  
Boeing Commercial Airplanes, Long Beach Division.**

LAB TESTS	TEST REQUIREMENTS	TEST RESULTS
SPRAYABILITY	Shall be sprayable after 3 hrs. at 10°F followed by 20 hrs. at 40°F.	Pass. Material sprayable using Pre-Val spraymaker HVLP spray gun. Good flow, no sags or wrinkles.
NON-VOLITAL CONTENT	Within ±2% of QPL value.	Pass. 38.3%.
LOW TEMP. ADHESION	Flaking less than 1/32" @ -40°.	Pass. No flaking or cracking.
VISUAL DETECTABILITY	Detectable by observation with the unaided eye.	Pass. Material has a light pink/or a light brown color.
REMOVABILITY	Completely removable with solvent.	Pass. Material removed with solvent after 8 passes with saturated cloth (Mil-T-81533) (1,1,1, trichlorethane).
DRYING TIME	Panels set to touch in 2 hrs. and dry through in 24 hrs.	Pass. Panels were set to touch in 1 hr. and dry through in 20 hrs.
EFFECT ON PAINT	No reduction in pencil hardness or staining.	Pass. No staining and pencil hardness in 5H.
EFFECT ON PLASTIC	No crazing, cracking or staining.	Pass. No staining, cracking or crazing.
WEIGHT PER GALLON	±0.3 pounds of QPL value.	Pass. 8.3 pounds.
WATER DISPLACEMENT	Displaces synthetic sea water - no visible pitting.	Pass. All three panels are free of pits. No staining or mottling visible.
VISCOSITY	To be within ±10% of QPL value at time of qualification.	Pass. #2 Zahn Cup - 20.5 seconds.
CORROSION INHIBITING CHARACTERISTICS	1.) 3 corrosion pits allowed per 10 sq. in. after 100 hrs. exposure. 2.) ASTM G34 Exfoliation.	1.) Pass. No corrosion after 5000 hours exposure. 2.) Pass. No exfoliation found on panels. Some pits over entire area of panel.
FUNCTIONAL PENETRATION	Average of 3 panels to be 90% or better wetted in 1 hr.	Pass. 90% penetration or better on all three test panels.



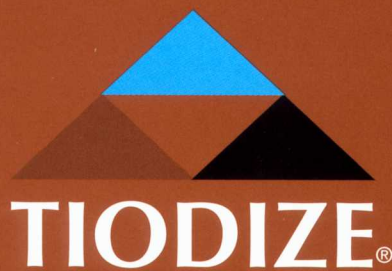
BOEING PHOTO OF Z-329 BEING APPLIED "ON-LINE". (SPRAY BOOTH NOT REQUIRED.)

## ADVANTAGES

- Non-flammable, low VOC.
- Prevents corrosion.
- Fast drying, good adhesion.
- Lightweight (2.28g/ft<sup>2</sup>/mil).
- Dry to the touch, easy to vacuum.
- Passes 5000 hrs. salt fog test.
- Easy to apply and inspect and re-apply.
- Penetrates to protect fasteners, joints and faying surfaces.
- Temperature range of -65°F to +350°F without cracking.
- Good film forming in closed cavities and open surfaces.
- Non-cracking film to meet stress and fatigue demands.
- Will displace water on surfaces affected by condensation, rain water, or remaining water from cleaning.
- Greater cost savings.

## PHYSICAL PROPERTIES

- Z-329 is a single component, water base coating.
- Z-329 has a low Volatile Organic Compound (VOC) level of less than 100 grams per liter.
- Z-329 will dry within 60 minutes (dry to the touch in 30 minutes).
- Z-329, when applied at a coating thickness of 1.0 mil, will cover approximately 800 square feet per gallon of material.
- Z-329 has been approved by Boeing Industrial Hygiene and Safety Services (IH&S) and Fire Services to be sprayed "on-line".
- Z-329 can be applied with conventional or High Volume Low Pressure (HVLP) spray equipment.
- Z-329 should be applied to a coating thickness of 0.5 to 1.0 mil (0.0005 to 0.001 inches).
- Z-329 passes 5000 hrs. salt fog test at 1.0 mil thickness on aluminum.



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