

Mirachem[®] 500 Materials Compatibility Testing

Test Description	Materials Tested	Dilution	Time Period	Temperature	Results
Exterior and General Cleaners Boeing D6-17487 Revision J	Sandwich Corrosion Test Acrylic Crazing Test Paint Softening Test Hydrogen Embrittlement Test	Full Strength & 1:9	As Specified	As Specified	Sandwich Corrosion Test Acrylic Crazing Test Paint Softening Test Hydrogen Embrittlement Test Conforms Conforms Conforms Conforms
Exterior and General Cleaners Boeing D6-17487 Revision K	Sandwich Corrosion Test Acrylic Crazing Test Paint Softening Test Hydrogen Embrittlement Test	Full Strength	As Specified	As Specified	Sandwich Corrosion Test Acrylic Crazing Test Paint Softening Test Hydrogen Embrittlement Test Conforms Conforms Conforms Conforms
General Purpose Cleaner Douglas Aircraft Company Customer Service Document CSD#1	Effect on Painted Surfaces Test Residue Test Sandwich Corrosion Test Stress Crazing on Acrylic Plastics Immersion Corrosion Test Cadmium Removal Test Hydrogen Embrittlement Test	Full Strength & Diluted 1:9	As Specified	As Specified	Effect on Painted Surfaces Test Residue Test Sandwich Corrosion Stress Crazing of Acrylic Plastics Immersion Corrosion Test Cadmium Removal Hydrogen Embrittlement Conforms Conforms Conforms Conforms Conforms Conforms
Effect of Cleaning Agents on Aircraft Engine Materials - ARP 1755B Stock Loss Test Method	Engine Materials - as specified in standard method.	1:1	30 Minutes	195°F	See report for details. Conforms
Effect of Cleaning Agents on Aircraft Engine Materials - ARP 1755B Stock Loss Test Method	AZ92 Magnesium	1:10	30 Minutes	120°F	AZ92 Magnesium Conforms
Stress Corrosion of Titanium Alloys by Aircraft Maintenance Materials (ASTM F 945)	AMS 4911 AMS 4916	1:1 1:9	As Specified		No surface reaction or cracking No cracking observed Conforms Conforms
Hot Corrosion Testing of Standard Gas Turbine Engine Alloys PWA 36604 Appendix A Pratt & Whitney	AMS 4037 Aluminum AMS 4375 Aluminum AMS 6359 Fe AMS 5508 Fe AMS 5536 Hastalloy X AMS 5544 Ni Waspalloy	1:1	As Specified	750°F ± 10°F 750°F ± 10°F 750°F ± 10°F 1050°F ± 10°F 1600°F ± 10°F 1600°F ± 10°F	AMS 4037 Aluminum AMS 4375 Aluminum AMS 6359 Fe AMS 5508 Fe AMS 5536 Hastalloy X AMS 5544 Ni Waspalloy Conforms Conforms Conforms Conforms Conforms Conforms

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	AMS 5608 Co Haynes 188			1600°F ± 10°F	AMS 5608 Co Haynes 188 Conforms
Determination of the Effect of Chemicals Cleaners on Non-Metallic (O-ring) Materials Pratt & Whitney	AMS 7267 (Silicone Rubber) AMS 7271 (Butadiene-Acrylonitrile) AMS 7273 (Fluorosilicone) AMS 7276 (Fluorocarbon)	Full Strength	2 hours	Ambient (77°F)	AMS 7267 (Silicone Rubber) AMS 7271 (Butadiene-Acrylonitrile) AMS 7273 (Fluorosilicone) AMS 7276 (Fluorocarbon) Conforms Conforms Conforms Conforms
Hot Dip Galvanizing Corrosion (per Mil-C-87973B)	Steel Panels conforming to Mil-S-7952, Grade 1020	Full Strength & 1:9	24 Hours & 72 Hours	As Specified	Type III (Undiluted) Type I, II, & IV (1:9) Conforms Conforms
Cleaner for Aircraft Exterior Surfaces Water-Miscible, Pressure-Spraying Type AMS 1526B	As Specified	Full Strength & 1:9	As Specified	As Specified	Sandwich Corrosion Total Immersion Corrosion Low -Embrittling Cadmium Plate Hydrogen Embrittlement Flash Point Effect on Transparent Acrylics Effect on Painted Surfaces Effect on Unpainted Surfaces Storage Stability Performance Quality Conforms Conforms Conforms Conforms Conforms Conforms Conforms Conforms Cert. by Mfg. Conforms
Special Immersion Corrosion (per ASTM F 483)	301 Stainless Steel 1020 Stainless Steel	2:1	168 Hours	100°F	Insignificant Weight Loss Conforms
Effect on Neoprene Seals	As Specified	1:9	24 Hours	100°F	No change was noted in hardness of the seal No swelling was noted.
Effect on Non-Metallics O-Ring Material Test	Buna Viton	1:1	72 Hours	Ambient	No Evidence of swelling or degradation.
Mechanical Hydrogen Embrittlement Testing of Plating Process and Aircraft Maintenance Chemicals (per ASTM F 519-93, Type 1C)	Type 1C Bare Steel @ 75% of notched tensile strength	1:9	200 Hours	72°F	No failures. Conforms
Mechanical Hydrogen Embrittlement Testing of Plating Process and Aircraft Maintenance	Type 1A Bare Steel @ 75% of notched tensile strength	1:3	200 Hours	72°F	No failures. Conforms

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Chemicals (per ASTM F 519-93, Type 1A)					
Mechanical Hydrogen Embrittlement Testing of Plating Process and Aircraft Maintenance Chemicals (per ASTM F 519-93, Type 1A)	Type 1A Bare Steel @ 75% of notched tensile strength	1:9	200 Hours	72°F	No failures. Conforms
