

Mirachem[®] 750 Materials Compatibility Testing

| Test Description | Materials Tested | Dilution | Time Period | Temperature | Results | |
|-------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|--------------|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Exterior and General Cleaners Boeing D6-17487 Revision L | Sandwich Corrosion Test Acrylic Crazing Test Paint Softening Test Hydrogen Embrittlement Test | Full Strength & 1:2 | As Specified | As Specified | Sandwich Corrosion Test Acrylic Crazing Test Paint Softening Test Hydrogen Embrittlement Test | Conforms See below ¹ 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 | 1:2 | 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 See below ¹ Conforms Conforms Conforms |
| ¹ Cleaner for Interior Materials of Aircraft (Biodegradable, Water Based) | Effect on Polycarbonate Plastic per AMS 1550A Stress Crazing of Acrylic Plastics | 1:2 1:6 | As Specified | As Specified | Type C Acrylic Plastic Type C Acrylic Plastic | Pass at 1:2 Dilution Pass at 1:6 Dilution |
| Effect of Cleaning Agents on Aircraft Engine Materials - ARP 1755B Stock Loss Test Method | Engine Materials - as specified in standard method. | 1:2 | 2 hours | 165°F | See report for details. | Conforms |
| Effect of Cleaning Agents on Aircraft Engine Materials - ARP 1755B Stock Loss Test Method | AZ92 Magnesium | 1:2 1:4 | 30 Minutes | 185°F | AZ92 Magnesium | Conforms |
| Effect of Cleaning Agents on Aircraft Engine Materials - ARP 1755B Stock Loss Test Method - Special Alloys | AMS 4050 Aluminum 7050-T74 AMS 4028 Aluminum 2014-T6 | 1:2 1:6 | As Specified | 165°F | AMS 4050 Aluminum 7050-T74 AMS 4028 Aluminum 2014-T6 | Conforms Conforms |
| Stress Corrosion of Titanium Alloys by Aircraft Maintenance Materials (ASTM F 945) | AMS 4911 AMS 4916 | 1:2 1:4 | As Specified | 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 AMS 5608 Co Haynes 188 | 1:4 | 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 1600°F ± 10°F | AMS 4037 Aluminum AMS 4375 Aluminum AMS 6359 Fe AMS 5508 Fe AMS 5536 Hastalloy X AMS 5544 Ni Waspalloy AMS 5608 Co Haynes 188 | Conforms Conforms Conforms Conforms Conforms Conforms Conforms |

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| Determination of the Effect of Chemicals Cleaners on Non-Metallic (O-ring) Materials Pratt & Whitney | AMS 7267 (Silicone Rubber) | Full Strength | 2 hours | Ambient (77°F) | AMS 7267 (Silicone Rubber) | Conforms |
| | AMS 7271 (Butadiene-Acrylonitrile) | | | | AMS 7271 (Butadiene-Acrylonitrile) | Conforms |
| | AMS 7273 (Fluorosilicone) | | | | AMS 7273 (Fluorosilicone) | Conforms |
| | AMS 7276 (Fluorocarbon) | | | | AMS 7276 (Fluorocarbon) | Conforms |
| | | | | | | |
| Emulsion Cleaning and Aqueous Degreasing Partial Testing to BAC 5763 Revision D Boeing Aircraft Company (Type II, Class 2, Grade B) | As Specified | 1:4 | As Specified | 165°F - 190°F | Etching | Conforms |
| | | | | | Intergranular Attack | Conforms |
| | | | | | Sandwich Corrosion | Conforms |
| | | | | | Hydrogen Embrittlement Unplated | Conforms |
| | | | | | Hydrogen Embrittlement Plated | Conforms |
| | | | | | Aq. Degreas. Painted/Sealed Surfaces | Conforms |
| Rubber Property - Durometer Hardness (per ASTM D 2240) | Teflon, Viton, Buna, Neoprene | Full Strength | 2 Hours | 165°F | No significant change observable. | Conforms |
| 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 at 200 hours. | Conforms |
| 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 | 1:4 | 200 Hours | 72°F | | Conforms |
| 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 at 200 hours | Conforms |