# Water Works™ Heavy Duty Degreaser Concentrate Certified Compliance List *

| Test Compliance | Description | Dilution | Materials Tested |
|---|---|---|---|
| Boeing D6-17487 Rev. P | Exterior and General Cleaners and Liquid Waxes, Polishes and Polishing Compounds | Full Strength & 1:9 | Sandwich Corrosion Test<br>Acrylic Crazing Test<br>Paint Softening Test<br>Hydrogen Embrittlement test |
| Douglas Aircraft Company Customer Service Document CSD No. 1 | Materials and Procedures for General Exterior Cleaning of Painted and Unpainted Surfaces (General Purpose Cleaner) | Full Strength & 1:9 | Effect on Painted Surfaces<br>Residue<br>Sandwich Corrosion<br>Stress Crazing Test on Acrylic Plastics<br>Immersion Corrosion, Aluminum<br>Cadmium Removal<br>Hydrogen Embrittlement |
| AMS 1526C | Cleaner for Exterior Surfaces Water-Miscible, Pressure-Spraying Type | Full Strength & 1:9 | Sandwich Corrosion<br>Total Immersion Corrosion<br>Low-Embrittling Cadmium Plate<br>Hydrogen Embrittlement<br>Flash Point<br>Effect on Transparent Acrylic Plastics<br>Effect on Painted Surfaces<br>Effect on Unpainted Surfaces |
| ARP 1755B | Effect of Cleaning Agents on Aircraft Engine Materials. Stock Loss Test Method. Category 10: Aqueous Cleaner | 1:1 | As specified in standard method. |
| ARP 1755B | Effect of Cleaning Agents on Aircraft Engine Materials. Stock Loss Test Method. | 1:1 | AMS 4434 (AZ92 Magnesium). |
| ASTM F 483 | Standard Test Method for Total Immersion Corrosion Test for Aircraft Maintenance Chemicals | 2:1 | AMS 5046 (1020 Steel)<br>AMS 5517 (301 Stainless Steel) |
| ASTM F 483 | Standard Test Method for Total Immersion Corrosion Test for Aircraft Maintenance Chemicals | Full Strength | AMS 5046 (1020 Steel)<br>AMS 5517 (301 Stainless Steel) |
| ASTM F 519 | Standard Test Method for Mechanical Hydrogen Embrittlement Evaluation of Plating Processes and Service Environments | 1:9 | Type 1a1, low-embrittling cadmium plated in accordance with MIL-STD-870 Type I Class 1. |
| ASTM F 519 | Standard Test Method for Mechanical Hydrogen Embrittlement Evaluation of Plating Processes and Service Environments | 1:9 | Type 1c, low-embrittling cadmium plated in accordance with MIL-STD-870 Type I Class 1. |
| Pratt & Whitney PWA 36604 Rev. D | Compatibility with PWA 407 Rubber | 1:1 | ASTM D 816 Method B, Type 1. |
| Pratt & Whitney PWA 36604 Rev. D | Stress Corrosion | 1:9 | ASTM F 945, Method A using AMS 4916. |
| Pratt & Whitney PWA 36604 Rev. D | Hot Corrosion | 1:1 | AMS 5544 (Waspaloy)<br>AMS 5536 (Hastelloy X)<br>AMS 5608 (Haynes 188)<br>AMS 5508 (Greek Ascoloy)<br>AMS 6359 (4340 Steel)<br>AMS 4037 (2024-T3 Aluminum)<br>AMS 4375 (AZ31B-0 Magnesium) |
| Pratt & Whitney PWA 36604 Rev. D | Compatibility with Non-Metallic Materials | Full Strength | AMS 7267 Silicon Rubber<br>AMS 7271 Butadiene-Acrylonitrile Rubber<br>AMS 7273 Fluorosilicone Rubber<br>AMS 7276 Flurocarbon Rubber<br>PWA 407 Rubber |
| Pratt & Whitney PWA 36604 Rev. D | Stress Corrosion | 1:1 | ASTM F 945, Method A using AMS 4911. |

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| Industry Approval | Description | Dilution | Test Method | Materials Tested |
|---|---|---|---|---|
| Honeywell (Allied Signal) EMS 53170 | Material Requirements for Aqueous and Semi-aqueous Degreasing | 1:1 | Appendix A. Etch Rate Test Method | Bare Aluminum (2024-T6)<br>Magnesium (AZ31)<br>Bare low alloy steel (4130)<br>Cadmium Plated steel (QQ-P-416 Type II)<br>Titanium 6-4,<br>Nickel based alloy (INCO625)<br>Ferrous alloy A286,<br>Stainless steel alloy (410 SS) |
| | | 2:1 | Appendix B. Sandwich Corrosion Test Method (In accordance with ASTM F 1110) | 7075-T6,<br>2024-T3,<br>7075-76 (spec: MIL-A-8625 Type II, Class 1)<br>2424-T3 (spec: MIL-A-8625 Type II, Class 1) |
| | | 1:1 | Appendix C. Intergranular Attack Test Method | Bare Aluminum (2024-T6)<br>Magnesium (AZ31)<br>Bare low alloy steel (4130)<br>Cadmium Plated steel (QQ-P-416 Type II)<br>Titanium 6-4,<br>Nickel based alloy (INCO625)<br>Ferrous alloy A286,<br>Stainless steel alloy (410 SS) |
| | | 1:1 | Appendix F. Hydrogen Embrittlement Test Method (In accordance with ASTM F519). | Unplated, notched tensile bars made from AISI 4340 in accordance with ASTM F 519, Type 1a. |
| | | 1:1 | Appendix G. Stress Corrosion and Hydrogen Pickup Test Method (In accordance with ASTM F 945). | AMS 4911 AMS 4916 |
| Honeywell Standard Practices Manual | Approved Engine Cleaner SPM 70-00-02, for T53 Engine Component Parts | | | |
| United Airlines Administrative / Technical Manual ACAppearance-UAL | Aircraft Exterior Wash Program | | | |

**Conforms to Nuclear Power Parts Cleaning Compatibility Test :**

Sulfur wt% <0.005 Zinc PPM <10
Antimony PPM <5 Bismuth PPM <16
Lead PPM <5 Tin PPM <5
Cadmium PPM <0.2

**South Coast Air Quality Management District: Certified as a Clean Air Solvent**

Compliant with SCAQMD 5 gm / liter when in dilutions of 2:1 or higher

*4/04/2018 Rev. 9*

# Water Works™ Heavy Duty Degreaser Concentrate Certified Compliance List *

| Certifications | Description |
|---|---|
| **Green Seal** | **GS-34: Environmental Standard for Cleaning and Degreasing Agents.** |

The performance requirements for Green Seal GS 34 have been meet. The process soil was successful cleaned at a 33% dilution using immersion cleaning, the maintenance soil cleaning when using ultrasonic energy at a 12.5% dilution of the product and the oil separation was successful when using the 12.5% dilution at room temperature.

| Test Compliance | Description | Dilution | Materials Tested |
|---|---|---|---|
| ASTM G-122 | Standard Test Method for Evaluating the Effectiveness of Cleaning Agents | 33% | 304 Stainless Steel Coupon |
| Mil-PRF87937C | Cleaning Compounds, Aerospace Equipment | 33% | 304 Stainless Steel Coupon |
| Mil-C-29602 | Cleaning Compounds, for Parts Washers and Spray Cabinets | 33% | 304 Stainless Steel Coupon |

Evaluated with the Irritection Assay System in order to predict its potential for ocular and dermal irritation. The ocular results indicated that the sample of Heavy Duty Degreaser is a mild ocular irritant. The dermal results demonstrated that the sample is a dermal non-irritant.

Aquatic Biodegradability in accordance with ISO 9439.

** "This product meets Green Seal™ Standard GS-34 based on effective performance and protective limits on: VOCs, ozone depleting chemicals, and human & environmental toxicity. GreenSeal.org. "*

**NSF** — **Category Code C1 – C Compound for use on all surfaces in inedible product areas, non- processing areas, and/or exterior areas. Registration Number 141454**

NSF Nonfood Compounds Program Listed Category C1 Registration #141453