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DOT 111/113  
TECHNICAL DATA SHEET

DOT 111/113 is a concentrated, fully-aqueous, liquid cleaning solution designed to replace 1,1,1-trichloroethane, CFC-113 and other hazardous solvents in specific applications. It can be effectively used in various types of aqueous cleaning equipment, including immersion cleaning, cabinet-washers, high and low pressure spray and ultrasonic equipment as well as hand-wipe and manual cleaning procedures.

DOT 111/113 is non-toxic, biodegradable and non-corrosive to a wide array of metals and metal alloys. DOT 111/113 is non-aggressive to plastics, polymers, rubber and other elastomeric materials commonly utilized in the aviation and aerospace industries.

DOT 111/113 PRODUCT ADVANTAGES

- Δ No Ozone Depletion Potential (ODP)
- Δ Virtually No Volatile Organic Compounds (VOCs)
- Δ Exceptional Cleaning Performance
- Δ No Excise Tax Increase Schedule
- Δ No Labeling Required
- Δ No Flash Point (even when misted)
- Δ Non-Toxic
- Δ Biodegradable
- Δ Wide Material Compatibility
- Δ No Residue Following Cleaning
- Δ Highly Dilutable
- Δ Non-Irritating to Skin
- Δ No Protective Outerwear Required\*
- Δ Conforms to MIL-C-87937A, Type II, Cleaning Compound, Aerospace Equipment
- Δ Contains no Hydrocarbons, Terpenes, Glycol Ethers, Aromatics or any Hazardous components as Defined in 29 CFR 1910.1200
- Δ Minimizes Hazardous Waste Disposal

\*Eye protection should be worn to shield the eyes from removed contaminants

DOT 111/113  
PHYSICAL PROPERTIES

Color:	Clear	Odor:	Odorless
pH (Neat):	9.4	(10%):	9.2
Insoluble Matter:	.02% wt	Non-Volatile Matter:	11.1%
Freeze-Thaw:	Stable	Density:	8.34 lbs/gal
Vapor Pressure:	39 mm/Hg @ 25° C		
Flash Point:	None to IBP (ASTM D56, D92)		
Hazardous Components:	Not Hazardous as Defined in 29 CFR 1910.1200		



DOT 111/113  
MATERIEL COMPATIBILITY

Materiel Compatibility is an important factor when choosing a cleaner. DOT 111/113 has undergone extensive testing to establish its acceptability for use on a wide array of metals, metal alloys and non-metallic materials. Many military and industry specifications establish specific pass/fail criteria for materiel compatibility testing. Metals and metal alloys compatibility testing includes immersion corrosion, sandwich corrosion, hydrogen embrittlement and to various ASTM, SAE and Military and Federal Standards.

**METALS AND METAL ALLOYS:**

ALUMINUM AND ALUMINUM ALLOYS, CLAD AND UNCLAD	CADMIUM PLATED STEEL
CARBON STEEL	STAINLESS STEEL ALLOYS
LOW ALLOY STEEL	CORROSION RESISTANT STEELS
SILVER PLATED STEEL	ALUMINUM-LITHIUM
MAGNESIUM ALLOY	TITANIUM AND TITANIUM ALLOY
NICKEL-BASED ALLOYS	IRON
HIGH NICKEL CONTENT FERROUS ALLOYS	NICKEL-COPPER ALLOYS
COPPER AND COPPER ALLOYS	COBALT ALLOY
ALUMINUM-BRONZE	
PLASMA COATED CORROSION-RESISTANT STEEL	
ELECTROPLATED CORROSION-RESISTANT STEEL	
CADMIUM PLATING	CHROMIUM PLATING
NICKEL-CADMIUM PLATING	COPPER PLATING
	SILVER PLATING
	NICKEL PLATING

**NON-METALLIC MATERIALS:**

ACRYLIC PLASTICS	POLYCARBONATE PLASTICS	RUBBER
POLYSULFIDE SEALANTS	DUPONT KAPTON®	DUPONT TEFZEL®

**OTHER MATERIEL COMPATIBILITY TESTING:**

HYDROGEN EMBRITTLEMENT	LOW-EMBRITTLING CADMIUM PLATE CORROSION
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**PERFORMANCE TESTING**

DOT 111/113 conforms to the following military and industry specifications:

- Δ MIL-C-87937, TYPE II, Cleaning Compound, Aerospace Equipment
- Δ SAE ARP 1755A Effect of Cleaning Agents on Aircraft Engine Materials, Stock Loss Method
- Δ GEAE CT-882 Requirements for Approving Cleaners for Solvent Replacements on Jet Engine Alloy Parts
- Δ BAC 5763D\*\* Immersion and Spray Cleaning/Degreasing Processes
- Δ Boeing D6-17487 Revision J - Aircraft Cleaning
- Δ Douglas CDS #1, Reissued 8/24/89 - Aircraft Cleaning

\*\*Testing performed by Scientific Materials International top 342 5763D Draft issued by Boeing Aircraft