

## OUR STORY...

Lear Chemical has been successfully developing and compounding anti corrosion lubricants and greases since 1979. For over thirty years we have been effectively solving corrosion related problems in the Automotive, Aviation, Industrial, Marine, Powersports and Recreational industries. Our technical success is balanced by combining laboratory testing with specific field evaluations to ensure that each formula produced meets advertised claims and customer expectations.

As a value added service Lear Chemical offers custom formulating services for clients desiring Private Label formulations that incorporate proven technologies, found in our commercial product lines. Research and development is not just a part of our name... It's who we are.

## WHY CONSIDER ACF-50:

- ACF-50 is a nationally recognized brand name with a loyal customer base.
- A 28 year time tested, proved record of performance that Government and Fleet operators depend on.
- ACF-50 is blended utilizing superior quality control ISO 9002 standards and has an excellent customer satisfaction record with a 0.0% return rate.
- Sold in multiple packaging sizes to suit a variety of market needs.
- Complete anti-corrosion solutions for both airframe, avionics and group support equipment.
- ACF-50 is Non-Toxic according to EPA / OSHA standards.
- VOC compliant world wide.
- Complete technical support for product application is available.
- On time shipping.
- EDI experienced.



ACF-50 has endorsements or approvals from 31 airframe OEM's and meets industry anti-corrosion performance requirements.

# OEM APPROVALS

**AEROCOMMANDER**

**AIR TRACTOR**

**ATR REGIONAL  
TRANSPORT**

**BOEING HELICOPTER**

**BOMBARDIER  
REGIONAL AIRCRAFT  
DIVISION**

**BELL HELICOPTER TEXTRON**

**BRITISH AEROSPACE**

**CANADAIR**

**CESSNA**

**CIRRUS**

**CONCORDE BATTERY CORP**

**EMBRAER**

**ENSTROM**

**ERICKSON**

**EXTRA AIRCRAFT**

**GULFSTREAM AEROSPACE**

**HAWKER-BEECHCRAFT**

**HILLER AIRCRAFT**

**LAKE AIRCRAFT**

**LOCKHEED MARTIN**

**MCDONNELL DOUGLAS CORP**

**MD HELICOPTER**

**MOONEY AIRCRAFT**

**PILATUS AIRCRAFT**

**PIPER**

**PRATT & WHITNEY**


**ROBINSON**

**ROLLS ROYCE**

**SIKORSKY**

**SCHWEIZER**

**VANS AIRCRAFT**



The FAA also recognizes ACF-50 as a "Suitable Corrosion Preventative Compound".



# PRODUCT SPECIFICATIONS

## ACF-50 PERFORMANCE QUALIFIED Mil-C-81309E Amd 3, Type II

Characteristics	Requirements	Test Para..	Found
- Minimum flash point	60°C (140°F)	4.7.1	Conforms (175F)
- Synthetic Sea Water-Sulfurous Acid Spray	Type II: No visible corrosion of carbon steel after 2 cycles.	4.7.2	Conforms
- Synthetic Sea Water displacement	No visible corrosion.	4.7.3	Conforms
- Removability	Not more than 3 cycles to remove.	4.7.4	Conforms
- Abrasives	Non present	4.7.5	Conforms
- Maximum film thickness	Type II: 0.0005 inches	4.7.6	Conforms
- Sprayability	Sprayable	4.7.7	Conforms
- Corrosivity	No visible pitting, etching or dark discoloration. No weight change (milligram/cm <sup>2</sup> ) greater than 0.5 for magnesium, cadmium, and zinc nor greater than 0.2 for aluminum, copper, and brass.	4.7.8	Conforms
- Staining	No visible evidence of staining or other deleterious effects.	4.7.9	Conforms
- Minimum dielectric breakdown	25,000 volts	4.7.10	Conforms 38,000 volts
- Mixability of compounds	No evidence of separation	4.7.11	Conforms
- Lubricity of compounds	Less than 0.20	4.7.12	Conforms
- Effect on electric components	No Significant change in capacitance, dissipation factor and conductance of coil forms and capacitors. For coils no significant change in the Q and amount of capacitance to resonate the coil. No significant change in the resistance of resistors. A change greater than 1/2 the allowed tolerance of the component shall be considered as significant.	4.7.13	Conforms
- Effect on electric connectors	No significant increase in resistance between connected pins or decrease in resistance between adjacent pins.	4.7.14	Conforms

## ADDITIONAL ACF-50 TEST DATA

TEST IDENTITY	TEST METHOD	RESULTS
BMS 3-23E Table I		
-Flash Point	ASTM D93	Pass
-Sprayability	MIL-C-1617D	Pass
-Low-Temperature Adhesion	MIL-C-1617D	Pass
-Nonvolatile Content	ASTM D1644	Pass
-Detectability		Pass
-Removability		Pass
-Storage Stability		Pass
-Drying Time		Pass
-Compatibility with Cadmium		Pass
Douglas Aircraft CSD #1		
- Painted Surfaces	ASTM F 502	Conforms
- Residue Surfaces	ASTM F 485	Conforms
- Sandwich Corrosion Test		Conforms
- Stress Cracking Acrylic Plastics	ASTM F 484	Conforms
- Immersion Corrosion Test	ASTM F 483	Conforms
- Cadmium Removal Test	ASTM F 1111	Conforms
Douglas Aircraft DMS 2150		
- Film Characteristic		Conforms
- Product Composition		Conforms
- Appearance		Conforms
- Toxicity		Conforms
- Flash Point	ASTM D-56	Conforms
- Nonvolatile Content	ASTM D-1644A	Conforms
- Viscosity	ASTM D-445	Conforms
- Salt Fog Exposure	ASTM B-117	Conforms
- Water Displacement		Conforms
- Removability		Conforms
- Storage Stability		Conforms
Table II		
-Water Displacement Ability	MIL-C-1617D	
-Viscosity		
-Corrosion Inhibiting Characteristics	FED-STD 791 (ASTM G 34)	
-Functional Penetration Test		Pass
Airbus Industrie TN A 007.10138 Corrosion Resistance To: Turco Toilet Fluid, Orange Juice, Coke, Coffee, De-Icing Fluid 3:4-1:2-1:4, %5 NaOH, %5 HCl, 5% HNO <sub>3</sub> , %10 CH <sub>3</sub> COOH, %45 Ethanol		
Volatile Organic Content		
-California Air Quality Compliant	ASTM 2369	>166.9g/L
Misc.		
-Humidity Resistance	AMS 3066B	Conforms
-Hydrogen Embrittlement	ASTM F 519	Conforms
-Polyimide Insulated Wire	MIL-C-87937B	Conforms





# KILLS CORROSION ON CONTACT

## SUGGESTED APPLICATIONS:

### Single Engine & Light Twins

Spray into: wing sections, fuselage, vertical & horizontal stabilizers, hinges, teleflex cables, air vent cables, trim cables, throttle cables, battery boxes, engine compartments, avionics, antenna mounts.

### Rotorwing Aircraft

Spray into: tail boom section, engine compartments, strap pack, landing gear, air vent cables, rotor head, grip areas, avionics, antenna mounts, cannon plugs.  
Spray or wipe on blades.

### Cargo Airlines

Spray into: wing sections, fuselage, vertical & horizontal stabilizers, landing gear compartments, micro switches, avionics, cannon plugs, cargo door brackets, garbage chutes, galleys, lavatory areas, belly skin sections, main spar sections.

### Float Equipped & Amphibious

Spray into: floats, fuselage, vertical & horizontal stabilizers, wing sections, bilge area, exterior of motors, connectors, cannon plugs, avionics, micro switches, antenna mounts.

### Turbo Props / Business Jets

Spray into: trim drum actuators, micro switches, landing gear and compartments, wheel hubs, thrust reverse mechanisms. Wipe on nacelles.

ACF-50 "the Professionals Choice" gives you the peace of mind, that your investment is receiving the best possible protection.





ANTI CORROSION FORMULA

## KILLS CORROSION ON CONTACT



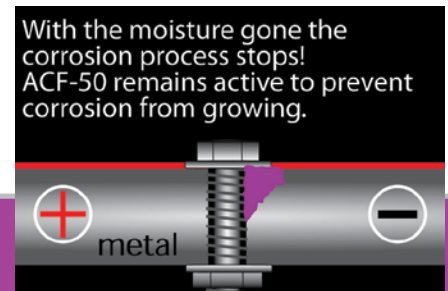
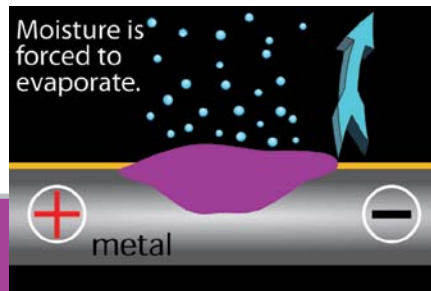
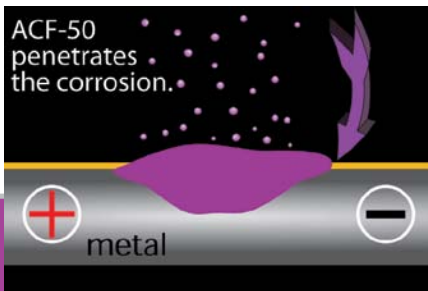
## TECH SPECS

### CORROSION

**A SIMPLE EXPLANATION:** Corrosion simply stated is a natural phenomenon which destroys most metals by either a chemical or electrochemical reaction. The metal is converted, usually with the help of an electrolyte, into a stable metallic compound such as an oxide, hydroxide, or sulfate. The rate at which metals corrode depends greatly on the environment they are exposed to, and the amount of preventive maintenance they receive. Metals that are exposed to marine atmospheres, moisture, tropical temperatures, and industrial chemical atmospheres have the highest rate of corrosion. The tendency of metals to corrode creates a serious problem in the area of aircraft operation.

### ACF-50 ANTI-CORROSION FORMULA

**HOW IT WORKS:** ACF-50, Anti-Corrosion Formula, is a state of the art, anti-corrosion lubricant compound, specifically designed for the Aero Space Industry. It is an ultra Thin Fluid Film Compound (TFFC) that actively treats metal using advanced polar bonding technology. As seen from the diagrams, ACF-50's synthetic inhibitors and active chemistry penetrates through the oxide deposits (white powder) to the base of the corrosion cell where it emulsifies, encapsulates, and then lifts the electrolyte away from the metal surface. ACF-50 then allows this moisture to evaporate while providing an atmospheric barrier that prevents further moisture contact. With the electrolyte removed the corrosion process is halted. ACF-50 actively penetrates and "creeps" into the tightest seams, lap joints, micro cracks, and around rivet heads, displacing moisture and other corrosive fluids (orange juice, coke, coffee, salt water) in these corrosion prone areas. **ACF-50's thin film acts like an "OFF SWITCH" for corrosion remaining effective for up to 24 months.**



**PREVENTS AND DEACTIVATES CORROSION ON METALS AND ELECTRONICS**  
**SAFELY LUBRICATES AND PENETRATES MECHANISMS**



Being "Pro Active" about corrosion control is the best way to protect your investment. Regular ACF-50 treatments reduce maintenance costs and improve overall flight safety. Lear Chemical's pioneered application methods and specially designed equipment, deliver ACF-50's penetrating fog to all critical aircraft structure. Technicians, at ACF-50 Corrosion Treatment Centers, offer complete airframe applications usually timed to your GA annual. Only ACF-50's advanced corrosion control properties, protect both the airframe and avionics systems. The US government, commercial airlines, fleet operators, and general aviation users have, through years of testing and use, proven ACF-50 delivers tough anti-corrosion protection. ACF-50 has endorsements or approvals from nineteen airframe OEM's and meets industry (AIRBUS, Boeing, Douglas, Mil-Spec) anti-corrosion performance requirements. The FAA also recognizes ACF-50 as a "suitable corrosion preventative compound."

## PROTECTS AIRFRAME AND COMPONENTS



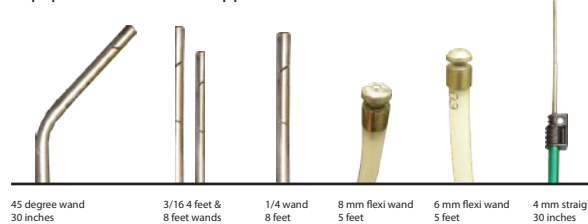
## REDUCE MAINTENANCE COSTS

- 27 Year proven track record at preventing & deactivating corrosion
- Significantly reduces corrosion events in both structure & electrical systems
- Easy and inexpensive to apply (aerosol cans/'fogging' technique provides 3000 sq. ft/gal)
- Ultra Thin Film promotes weight reduction, improving payload capacity
- Non-toxic (no SCBA required) Low VOC and 50 State compliant, with pleasant odor
- Protects against all common electrolytes
- Will not interfere with NDT procedures



Includes Bullet Tip:

Equipment Includes 7 Application Wands



45 degree wand 30 inches    3/16 4 feet & 8 feet wands    1/4 wand 8 feet    8 mm flexi wand 5 feet    6 mm flexi wand 5 feet    4 mm straight 30 inches

Comprehensive Training DVD included with purchase of equipment.





**ANTI CORROSION FORMULA**

**Reduce Maintenance Costs.  
Improve on-time readiness!**



**BOMBARDIER**

**DASH 8 100-300 (Q400 pending)**  
Corrosion Preventative Compound  
Electrical Systems - SYD-8-20-001  
Structural AMM-51-31-00 REF 13-16  
BAMS 565-006 TYPE III

- 26 Yr. Proven track record at preventing & deactivating corrosion
- Significantly reduces corrosion events in both Structure & Electrical Systems
- Easy and inexpensive to apply (aerosol cans/'fogging' technique provides 3000 sq. ft/gal)
- Ultra Thin Film promotes weight reduction, improving payload capacity
- Removal not required for re-application, creates no HAZ-MAT residue, saving time & money
- Non-toxic (no SCBA required) - Low VOC and 50 State compliant, with a pleasant odor
- Protects against all common electrolytes (orange juice, coke, coffee, de-icing fluids, toilette fluids, acids, etc. per AIRBUS TNA 007.10138
- Will not interfere with NDT procedures



P/N	Packaging
10013	ACF-50 13oz. Aerosol
10032	ACF-50 32oz. w/Pump-Up Atomizer
10004	ACF-50 1 Gallon
10020	ACF-50 5 Gallons
10114	ACF-50 30 Gallons
10205	ACF-50 50 Gallons
50000	ACF-50 Hand Held Spray System

**OEM Approved**



**ATR REGIONAL TRANSPORT**

ATR 42-72  
Corrosion Protection  
Ref. JIC-122351-PRO-10 000



**BAE SYSTEMS**

BAE 146-100  
Corrosion Preventative Compound  
Material Spec 89/042



**EMBRAER**

EM RJ 130-145  
Periodic Lubrication of Landing Gear  
SNL 145-32-0035, Nov/2008



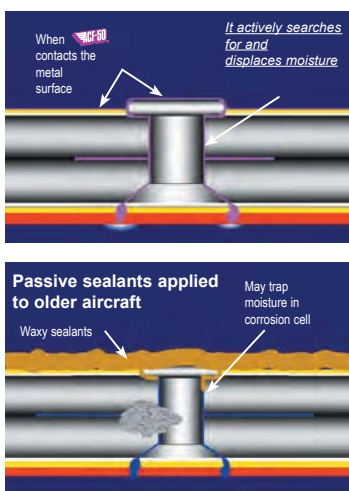
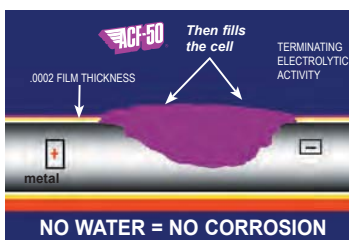
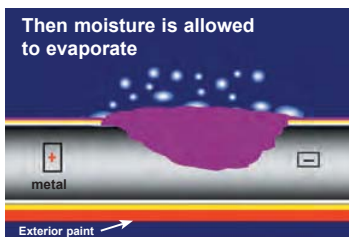
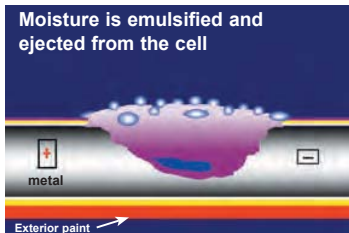
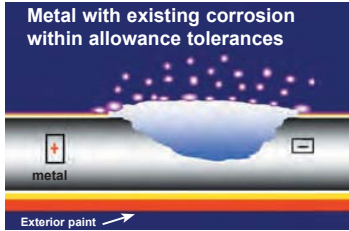
**HAWKER-BEECHCRAFT**

BEECH 1900C-D  
Corrosion Control  
Manual 114-590021-197  
Chapter 20, chart 2, item 39



# ACF-50<sup>®</sup>

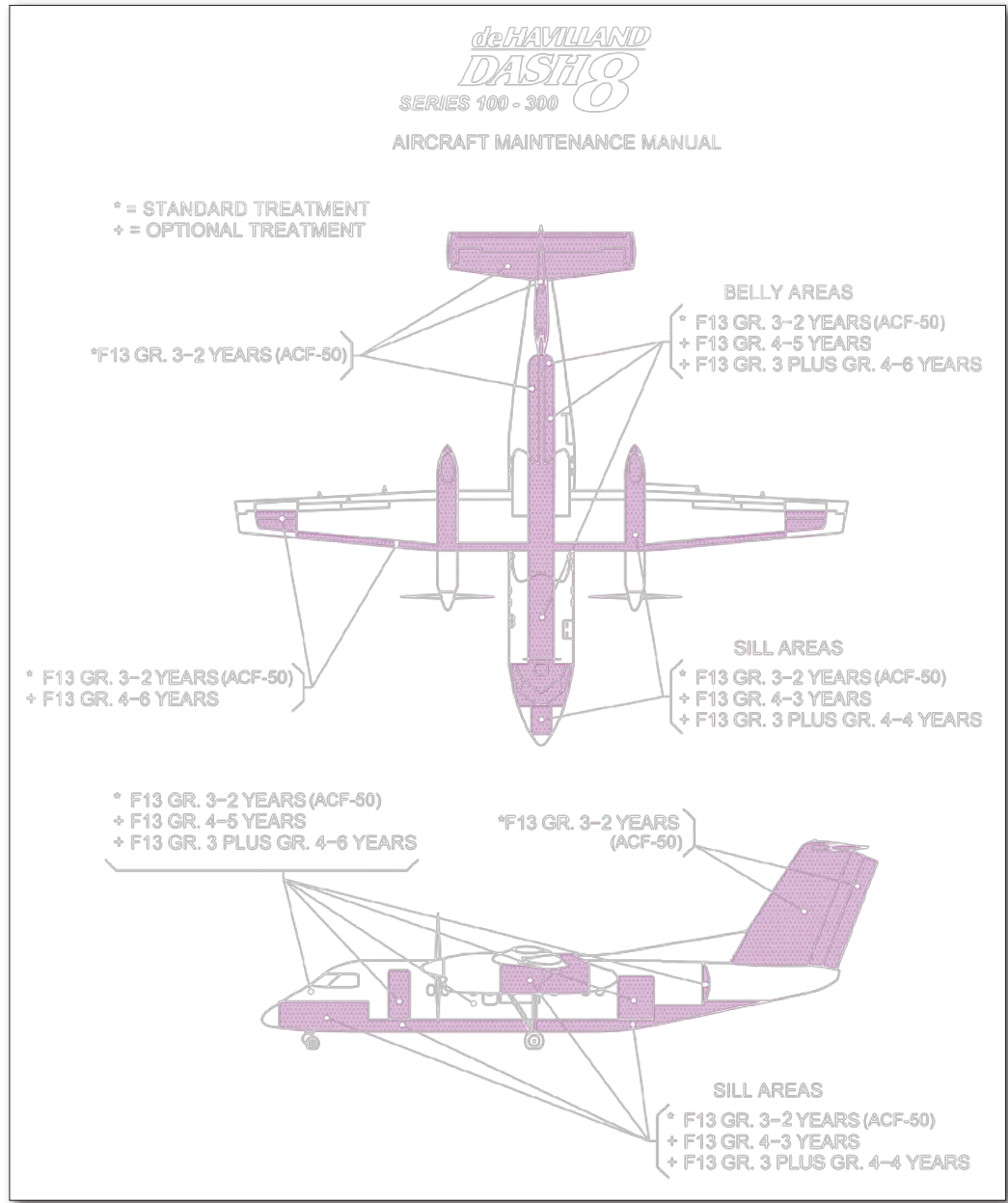
ANTI CORROSION FORMULA



The rate at which metals corrode depends greatly on the environment they are exposed to, and the amount of preventative maintenance they receive.

ACF-50 actively penetrates and ‘creeps’ into the tightest seams, lap joints, micro cracks, and around rivet heads, displacing moisture and other corrosive fluids (orange juice, coke, coffee, salt water) in these corrosion prone areas.

ACF-50’s thin film acts like an “OFF SWITCH” for corrosion remaining effective for up to 24 months. Regular ACF-50 treatments reduce maintenance costs and improve overall flight safety. ACF-50’s advanced corrosion control properties protect both the airframe and avionic systems.





# ACF-50 13oz Aerosol



**Trilingual Packaging - English / Spanish / French**

Aerosol packaging is suited for spot treatments and can be easily incorporated into phase maintenance inspections.

<b>QTY PER BOX</b>	<b>12 x 13 oz</b>
<b>BOX DIMENSIONS</b>	<b>10 (L) x 7.5 (W) x 10 (H)</b>
<b>WEIGHT PER BOX</b>	<b>11.3 lbs</b>
<b>QTY PER PALLET</b>	<b>150 Cases</b>
<b>SHIPPING CLASSIFICATIONS:</b>	
<b>GROUND - CONSUMER COMMODITY</b>	
<b>NON HAZARDOUS - NON FLAMMABLE - NON TOXIC</b>	
<b>AIR - UN 1950-CLASS</b>	<b>2.2-NON FLAMMABLE GAS</b>
<b>HARMONIZED CODE</b>	<b># 3403.19.1000</b>

# ACF-50 32oz Bottle w/Spray Atomizer



Trilingual Packaging - English / Spanish / French

Great for small FBO Operators

- easy to handle, minimum inventory cost

Individuals who prefer to spray their own airplanes

- eg. a Cessna 172 will require approximately 2 quarts

QTY PER BOX                      4 x 32 oz

BOX DIMENSIONS                8.75 (L) x 7.5 (W) x 9.25 (H)

WEIGHT PER BOX                8.8 lbs

QTY PER PALLET                 150 Cases

SHIPPING CLASSIFICATIONS:

GROUND - NON REGULATED - NON HAZARDOUS  
NON FLAMMABLE - NON TOXIC

AIR - NON REGULATED - NON HAZARDOUS

HARMONIZED CODE # 3403.19.1000



# ACF-50 4Ltr / 5 Gallon



Trilingual Packaging - English / Spanish / French

Packaging for:

- small to medium FBO Operators
- fleet accounts
- aviation schools

Easy size to handle, Minimum inventory cost

QTY PER BOX	4 x 4 Ltr
BOX DIMENSIONS	11 (H) x 12 (W) x 20 (L)
WEIGHT PER BOX	34 lbs
QTY PER PALLET	28 Cases

SHIPPING CLASSIFICATIONS:

GROUND - NON REGULATED - NON HAZARDOUS  
NON FLAMMABLE - NON TOXIC

AIR - NON REGULATED - NON HAZARDOUS

HARMONIZED CODE # 3403.19.1000

# ACF-50 20Ltr / 5 Gallon



**Packaging for:**

- medium to large FBO Operators
- large fleet accounts
- government accounts

**New Stackable container for cost-effective shipping**

**QTY PER BOX                    1 x 20 Ltr**

**BOX DIMENSIONS                Standard Size**

**WEIGHT PER BOX                42 lbs**

**QTY PER PALLET                36 Pails**

**SHIPPING CLASSIFICATIONS:**

**GROUND - NON REGULATED - NON HAZARDOUS  
NON FLAMMABLE- NON TOXIC**

**AIR - NON REGULATED - NON HAZARDOUS**

**HARMONIZED CODE            # 3403.19.1000**



# ACF-50 Drums

205 Litre or 50 Gallon

114 Litre or 30 Gallon



<b>QTY</b>	1 x 205 Ltr 1 x 114 Ltr
<b>DIMENSIONS</b>	205 ltr 23.5 (D) x 35.5 (H) 114 ltr 19.5 (D) x 29.5 (H)
<b>WEIGHT PER DRUM</b>	205 ltr 400 lbs 114 ltr 220 lbs
<b>QTY PER PALLET</b>	4 drums per pallet

## SHIPPING CLASSIFICATIONS:

**GROUND - NON REGULATED - NON HAZARDOUS  
NON FLAMMABLE - NON TOXIC**

**AIR - NON REGULATED - NON HAZARDOUS**

**HARMONIZED CODE # 3403.19.1000**

# ACF-50 Hand Held Spray System

Includes Bullet Tip:



Equipment Includes 7 Application Wands



45 degree wand  
30 inches

3/16 4 feet &  
8 feet wands

1/4 wand  
8 feet

8 mm flexi wand  
5 feet

6 mm flexi wand  
5 feet

4 mm straight  
30 inches



# ACF-50 Standard Spray System

Includes Bullet Tip:



Equipment Includes 7 Application Wands

Training DVD Included



45 degree wand  
30 inches

3/16 4 feet &  
8 feet wands

1/4 wand  
8 feet

8 mm flexi wand  
5 feet

6 mm flexi wand  
5 feet

4 mm straight  
30 inches