

SURFACE TREATMENTS

Product	Applications						Characteristics				Alloys					Operation		Description			
	Metal Processing Lines	Jet Engine Cleaning	Aircraft Parts Cleaning	Aircraft Depaint & Repaint	Coolants	Aircraft Appearance	Aircraft Protection	Consistency	Form	How to Apply	Mix Ratio (product:water)	Chemistry	Aluminum	Magnesium	Stainless Steel	Titanium	Ferrous		Non-Ferrous	Temperature	Time
ALKALINE CLEANERS																					
Ridoline® 298™	•						Liquid	Concentrated	Immersion	4%-10% in water	Alkaline	•							Maximum 130°-180°F 55°-80°C	3-15 minutes	Ridoline® 298™ is a liquid, non-silicated, immersion cleaner for aluminum and aluminum alloys. It is formulated for use in anodizing and conversion coating lines. It is free rinsing and will remove a variety of soils including oils, greases, inks, and wax-based markings.
Ridoline® 4355™	•						Liquid	Concentrated	Immersion	5%-15% in water	Alkaline	•							110°-160°F 40°-70°C	2-15 minutes	Ridoline® 4355™ is a phosphate-free liquid, immersion-applied, non-etching, cleaning product designed specifically to replace halogenated hydrocarbon vapor degreasers for cleaning aluminum alloys. It is formulated for removal of various soils, such as oils, greases, inks, and wax-based markings. Superior cleaning characteristics compared to vapor degreasing, while providing some amount of interstage corrosion protection.
TURCO® 4215 NC-LT™	•	•					Powder	Concentrated	Immersion, Spray or Ultrasonic	Immersion: 40-60 g/l Spray: 7-15 g/l Ultrasonic: 3-15 g/l	Mildly Alkaline	•		•		•	•	113°-131°F 45°-55°C	Immersion: 5-10 mins Spray: 2-4 mins	TURCO® 4215 NC-LT™ is a white granular mix developed for cleaning ferrous and non-ferrous alloys by spray, immersion and ultrasonic methods at low temperatures. Ideal for cleaning fuel and hydraulic components and for cleaning metals prior to metal bonding.	
TURCO® 5578-L™	•						Liquid	Ready to Use	Immersion or Spray	Use as Received or Diluted to 15%	Alkaline					•		176°-203°F 80°-95°C	Immersion: 15-60 minutes	TURCO® 5578-L™ is an amber liquid compound formulated to clean and etch titanium, columbium and tantalum alloys by spray or immersion systems. Readily removes mill soils, marking inks, lube oils, cutting oil and fingerprints at a low concentration and will etch titanium at higher concentrations. It is an effective etch prior to adhesive bonding, diffusion bonding, painting, welding and brazing. Boeing approved.	
TURCO® 5948-DPM™		•	•	•		•	Liquid	Concentrated	Immersion, Spray or Mop	Immersion: 1:3-20 Spray/Mop: 1:9-30	Alkaline, Water-Based	•		•	•			149°-176°F 65°-80°C	Immersion: 5-15 minutes	TURCO® 5948-DPM™ is an alkaline, water-based, blue concentrated compound formulated to effectively clean painted and unpainted aircraft exterior and interior surfaces when diluted with water. Ideally suited for use on all models of jet aircraft. It is also designed to be used in immersion tanks for dip applications.	
TURCO® 6751-L™	•		•				Liquid	Concentrated	Spray	1%-4% in water	Alkaline						•	•	86°-140°F 30°-60°C	1-2 minutes	TURCO® 6751-L™ is a liquid alkaline low temperature cleaner for spray applications. It is a brown colored liquid, developed to remove shop soils, lube oils, light drawing oils and drawing waxes from ferrous and non-ferrous metals. Rinses from metal surfaces with room temperature water and is effective from 86°-140°F/30°-60°C.
TURCO® 6849™	•	•		•			Liquid	Concentrated	Immersion	10%-20% in water	Alkaline	•	•	•	•	•	•	131°-158°F 55°-70°C	Varies as needed	TURCO® 6849™ is a clear aqueous alkaline degreaser formulated to remove shop soils, marking inks, cosmoline, grease and lube oils from ferrous and non-ferrous alloys. Offers both exceptional effectiveness and exceptional tank life. Replaces solvent type vapor degreasing fluids with an effective aqueous cleaner. The costs and hazards normally associated with chlorinated solvent cleaning are thereby greatly reduced.	
TURCO® Liquid ARR (T-4181-L)	•	•					Liquid	Concentrated	Immersion	50%-75% in water	Alkaline			•	•	•		176°-203°F 80°-95°C	15-60 minutes	TURCO® Liquid Alkaline Rust Remover (T-4181-L) is an amber liquid compound formulated to remove rust, paints, lube oils, drawing pastes, cutting oils and protective oils from ferrous alloys by immersion methods. Will not attack ferrous alloys, magnesium alloys, stainless steels, brass, bronze or Monel alloys when used as directed. Can be used on titanium alloys when diluted to 12% to 15% in water at 158°-167°F/70°-75°C.	
TURCO® Vitro-Klene	•						Powder	Concentrated	Immersion	60-75 g/l	Caustic						•	•	158°F/70°C to Boiling Point	Varies as needed	TURCO® Vitro-Klene is a brown granular mixture formulated to remove drawing compounds, lube oil, rust preventive compounds, and other tenacious soils from ferrous and titanium alloys prior to vitreous enameling and other processes that require a high degree of cleanliness. Will provide a water-break-free surface when used as recommended. Corrosive to aluminum, cadmium and zinc alloys, and should not be used on these alloys. Approved to Boeing BAC 5749.

Metal Preparation Process:

1. Clean.
2. Deoxidize.
3. Etch.
4. Conversion Coat.

Typical Titanium Pretreatment Process:

1. Aqueous clean with Ridoline® 4355™.
2. Rinse.
3. Alkaline clean (see above).
4. Acid etch with Nitradd.

5. Rinse.
6. Conversion coat with Alodine® 5200™.

Typical Aluminum Pretreatment Process:

1. Aqueous degrease with Ridoline® 4355™ or TURCO® 6849™.
2. Rinse.
3. Alkaline clean with Altrex® 24™ or Ridoline® 4355™.

4. Rinse.
5. Alkaline etch with Mil-Etch® or Aluminux® Etch L.
6. Rinse.
7. Deoxidize with Deoxidizer 6/16 or Deoxalume® 2310™.

8. Rinse.
9. Conversion coat with Alodine® 5200™, Alodine® 1200S™, or Anodize.
10. Rinse.

ALKALINE CLEANERS

SURFACE TREATMENTS

	Metal Processing Lines	Jet Engine Cleaning	Aircraft Parts Cleaning	Aircraft Depaint & Repaint	Coolants	Aircraft Appearance	Aircraft Protection	Consistency	Form	How to Apply	Mix Ratio (product:water)	Chemistry	Aluminum	Magnesium	Stainless Steel	Titanium	Ferrous	Non-Ferrous	Temperature	Time		
																						Product
DEOXIDIZERS	DEOXIDIZERS																					
	Deoxalume® 2310™	•						Liquid	Concentrated	Immersion or Spray	10-20% Deoxalume® 2310™ by Volume, 25-30% Nitric Acid	Acidic, Non-Chrome	•						60°-90°F 15°-30°C	2-10 minutes	Deoxalume® 2310™ is a chromium-free concentrated acidic liquid product specifically formulated for deoxidizing and desmutting wrought aluminum alloys. Extremely effective in removing surface oxides, discolorations due to heat treatment or thermal deburring, and smut that develops during alkaline etching and chemical milling. Meets the deoxidizing requirements of MIL-W-6858C, Paragraph 4.2 and many other aerospace specifications.	
	TURCO® Aldox V	•						Liquid	Concentrated	Immersion or Spray	13-17% TURCO® Aldox V 23-27% Nitric Acid	Non-Chrome	•						50°-120°F 10°-50°C	Varies with Alloy	TURCO® Aldox V is a brown liquid formulated to deoxidize, desmut, and lightly etch aluminum alloys by spray or immersion methods. Free of chrome and is ideal for processing alloys that require low surface resistance prior to anodizing, conversion coating, bonding, or welding. It is approved by Boeing BAC 5765.	
	Deoxidizer 6/16	•						Liquid	Concentrated, Two Packages	Immersion or Spray	For 100 gals Solution: 5 gal Deoxidizer 6, 10 gal Nitric or 5 gal Sulfuric Acid	Chromated	•						60°-90°F 15°-30°C	Immersion: 1-20 mins Spray: 30 secs-3 mins	The Deoxidizer 6/16 process primarily utilizes two liquid products Deoxidizer 6 Makeup and Deoxidizer 16 Replenisher. These are added to either dilute nitric acid or dilute sulfuric acid to produce an efficient production bath for deoxidizing, desmutting or acid etching aluminum and its alloys. Process approved for BAC 5765, Solution 27 (A, B & C).	
	TURCO® Liquid Smut-Go® NC	•						Liquid	Concentrated	Immersion or Spray	18%-20% in water	Acidic, Non-Chrome	•						50°-122°F 10°-50°C	1-10 minutes	TURCO® Liquid Smut-Go® NC is a dark brown liquid formulated to deoxidize and desmut aluminum alloys by spray or immersion methods. Chromate-free. Ideal for processing alloys that require low surface resistance prior to anodizing, conversion coating, bonding, or welding.	
TURCO® Nitradd (T-4104)	•						Liquid	Concentrated	Immersion		Varies with Alloy	Acidic			•	•			Depends on alloy See data sheet.	See data sheet.	TURCO® Nitradd is a clear, colorless liquid acidic compound designed to be added to nitric acid/water solutions to enhance the descaling and pickling of stainless steels and heat resistant alloys, including titanium alloys, by immersion methods.	
ETCHANTS	ETCHANTS																					
	Aluminux® Etch L™	•						Liquid	Concentrated	Immersion	10%-15% in water	Alkaline	•					•		100°-160°F 40°-70°C	2-10 minutes	Aluminux® Etch L™ is a concentrated liquid alkaline product developed to produce a fine satin etch on aluminum and its alloys. It offers an exceptionally uniform etch and extended bath life. Approved for BAC 5786 use.
	Alumiprep® 33™	•		•				Liquid	Concentrated	Immersion, Brush or Spray	Immersion: 1:3 Brush: 1:2 to 5, Spray: 1:3	Phosphoric Acid-Based	•						Ambient to 120°F/49°C		Alumiprep® 33™ is a non-flammable phosphoric acid-based cleaner, brightener and prepaint conditioner for aluminum. It should not be used on high copper bearing aluminum alloys or aluminum castings. Cleaning with Alumiprep® 33 produces a chemically clean and corrosion-free aluminum surface.	
	TURCO® Metal Glo #6			•				Liquid	Concentrated	Brush or Spray	Full strength or 1:1	Acid, Solvent	•						Ambient to 120°F/49°C	Varies with temperature	TURCO® Metal Glo #6 is a non-flammable tri-acid detergent-solvent-based cleaner, brightener, deoxidizer and prepaint conditioner for aluminum. It contains viscosity builders that allow for added contact time for vertical surfaces. Produces a chemically clean (water-break-free) and streak-free surface when used according to directions. Meets the requirements of MIL-C-38334A, Amend. 1, Type 1, Class 1. Listed on QPL. Can be used on all aircraft metals, except magnesium and high strength steel. This product is non-crazing to acrylics and can be used over well-bonded paints.	
	Mil-Etch®	•						Powder	Concentrated	Immersion		3%-6% in water	Alkaline	•				•		100°-160°F 40°-70°C	5-10 minutes	Mil-Etch® is a granular alkaline product formulated to produce a fine satin or frosted etch on aluminum and its alloys. The working solution develops a low level foam blanket to prevent caustic mist from escaping into the workplace. Approved for use under BAC 5786.
	Nova EC-202 L	•						Liquid	Concentrated	Immersion		4%-10% in water	Alkaline	•				•		120°-180°F 50°-85°C	1-5 minutes	Nova EC-202 L is a liquid alkaline aluminum etch cleaner for immersion applications that will produce a lightly etched finish on aluminum alloys, while simultaneously removing any oils and other soils present on the work surface. Approved for use under BAC 5786.
TURCO® WO #1	•			•			Liquid	Concentrated	Immersion or Spray		5%-25% in water	Acidic	•		•				Ambient to 140°F/60°C	3-10 minutes	TURCO® WO #1 is clear, colorless liquid acid cleaner and deoxidizer designed for use on aluminum and aluminum alloys. It may be used in dip, spray and hand wipe processes.	
CONVERSION COATINGS	CONVERSION COATINGS																					
	Alodine® 600™	•		•				Powder	Concentrated	Immersion or Spray	12.5 lbs per 100 gals water or 15 g/l	Chromate No Cyanide	•						70°-100°F 20°-40°C	1-5 minutes	Alodine® 600™ is a powdered chemical used to produce a chromate conversion coating on aluminum and its alloys, which ranges in color from light, iridescent gold to tan. Approved under MIL-C-81706 for use by Application Methods A and C, Classes 1A and 3. Listing on QPL 81706 indicates its acceptance under the MIL-C-5541 document of current issue.	
	Alodine® 600 RTU™			•				Liquid	Ready to Use	Immersion or Spray	Use as Received	Chromate No Cyanide	•						70°-100°F 20°-40°C	Immersion: 2-5 mins Spray: 15-30 secs	Alodine® 600 RTU™ is a ready to use liquid product that produces a chromate conversion coating on aluminum and its alloys. The coating produced provides excellent protection for unpainted aluminum and bonds paint well.	
	Alodine® 1000 RTU™	•		•				Liquid	Ready to Use	Brush or Spray	Use as Received	Chromate	•						Ambient	1-3 minutes	Alodine® 1000 RTU™ is a ready to use aqueous solution for producing a protective coating on aluminum and its alloys. The coating provides excellent protection for painted and unpainted aluminum and bonds paint well. It is specifically designed for touching-up abraded or damaged areas.	
	Alodine® 1200S™	•		•				Powder	Concentrated	Immersion		6.3 lbs per 100 gals water or 8 g/l	Chromic Acid-Based	•					70°-100°F 20°-40°C	15 seconds to 3 minutes	Alodine® 1200S™ is a powdered chemical used to produce a protective coating on aluminum to minimize corrosion and provide an improved bond for paint. Alodine® 1200S™ coating chemical, listed on QPL-81706, is an approved material to produce Class 1A and Class 3 coatings, bare or painted, in accordance with MIL C-5541C.	
	Alodine® 1201™	•		•				Liquid	Brush: Ready to Use	Brush or Immersion		Immersion: 33 gals per 67 gals water	Chromic Acid-Based	•					Ambient to 100°F/38°C	2-5 minutes	Alodine® 1201™ is a non-flammable, chromic acid-based coating chemical that will produce a chrome conversion coating on aluminum and its alloys.	
	Alodine® 1500™	•						Liquid	Concentrated	Immersion or Spray		1 gal per 100 gals water or 10 g/l	Chromic Acid-Based	•					70°-160°F 20°-70°C	Immersion: 2-5 mins Spray: 15-30 secs	Alodine® 1500™ is a liquid chemical used to produce a protective coating on aluminum or aluminum alloys. The coating provides protection for aluminum and is an excellent bond for clear organic coatings. Listed on the register for QPL-MIL-C-81706 and is approved to be used by Methods A and C (spray and immersion processing) to produce Class 3 coatings in accordance with MIL-C-5541 (current issue). May also be used to process aluminum under Specification MIL-S-5002.	
	Alodine® 1600™	•						Liquid	Concentrated, Two Packages	Immersion or Spray		1.3%-2% in water	Chromate	•						60°-130°F 15°-55°C	1-5 minutes	Alodine® 1600™ is a concentrated liquid two-package chemical used to produce a chromate conversion coating on aluminum and all its alloys. The color ranges from light iridescent gold to tan. It does not contain complex cyanides. Approved for use under MIL-DTL-81706A, formerly MIL-C-81706, Classes 1A and 3, Form, I, Method C and BAC-5719.
	Alodine® 5200™	•						Liquid	Concentrated	Immersion or Spray		1.5%-7.5% in water	Organo-Metallic	•	•		•			70°-120°F 20°-50°C	1-5 minutes	Alodine® 5200™ treatment is a chromium-free product specifically formulated for treating non-ferrous alloys. Spray or immersion applications may be used. This process provides an excellent base for bonding of adhesives and organic finishes.
	Alodine® 5700™			•				Liquid	Ready to Use	Spray		Use as Received	Organo-Metallic	•	•		•			Ambient to 100°F/38°C	2-5 minutes	Alodine® 5700™ is a chromium-free conversion coating specifically formulated for treating aluminum and its alloys. This product is formulated as a ready to use material for spray applications. The process provides an excellent base for organic finishes.
	Touch-N-Prep® Alodine® 1132™	•		•				Liquid	Ready to Use	Pen		Use as Received	Chromate	•						Ambient	Until dry	A felt-tipped marker that provides a chromate conversion coating on aluminum surfaces prior to painting. Meets MIL-DTL-81706A, Class 1A & 3, Form VI, Method D. Ideal for coating repair work.
	Brush Alodine® 120™ Kit	•		•				Liquid	Ready to Use Two-Part Kit	Kit		Use as Received	Chromate	•						Ambient	Until dry	Brush Alodine® 120™ Chemical Kit contains products formulated for treating aluminum to conform to MIL-C-5541C, Class 1A. The kit contains sufficient chemicals for cleaning and coating approximately 100 square feet of aluminum surface when used under normal conditions and in accordance with the directions.
	Magnesium Treatment Kit			•				Liquid	Ready to Use	Brush		Use as Received	Chromate	•						Ambient	1-5 minutes	Magnesium Treatment Kit contains products formulated for treating magnesium alloys to conform to SAE AMS-M-3171, Type VI. The application method conforms to requirements in NAVAIR 01-1A-509 and is meant primarily for touch-up, corrosion repair processes of magnesium alloys.

SURFACE TREATMENTS

JET ENGINE CLEANERS

JET ENGINE CLEANERS

Product	Applications	Characteristics	Alloys	Operation	Description
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JET ENGINE CLEANING, COLD LINE

Product	Applications	Characteristics	Alloys	Operation	Description
TURCO® 5668™	• • •	Liquid Ready to Use Immersion Add entire contents of container to stripping tank	Alkaline	158°-176°F 70°-80°C 15-60 minutes	TURCO® 5668™ is a diphase, liquid paint remover developed to remove resistant coatings, such as aluminized silicones, polyurethanes, acrylics, epoxies and chromated primers without using phenols, chromate, chlorinated solvents or acids. Ideal for the removal of PRC-1560M and PRC-1560MC coatings and is not detrimental to aircraft metals such as aluminum, titanium, magnesium, cadmium, conversion coatings, Dow coatings or ferrous alloys. Meets all requirements of MIL-R-83936B for removal of paint from aircraft wheels, landing gear components, and other aircraft and AGE components.
TURCO® 5948-DPM™	• • • • •	Liquid Concentrated Immersion, Spray or Mop Immersion: 1:3-20 Spray/Mop: 1:9-30	Alkaline, Water-Based	149°-176°F 65°-80°C Immersion: 5-15 minutes	TURCO® 5948-DPM™ is an alkaline, water-based, blue concentrated compound formulated to effectively clean painted and unpainted aircraft exterior and interior surfaces when diluted with water. Ideally suited for use on all models of jet aircraft. It is also designed to be used in immersion tanks for dip applications.
TURCO® Liquid Sprayeze NP-LT™	• • •	Liquid Concentrated Immersion or Spray Immersion: 15%-25% in water Spray: 3%-10% in water	Alkaline, Water-Based	90°-190°F 30°-90°C Immersion: 5-30 minutes Spray: 1-2 mins	TURCO® Liquid Sprayeze NP-LT™ is a straw colored liquid, developed to remove shop soil, lube oils, light drawing oils and drawing waxes from ferrous, aluminum, copper and titanium alloys. Suitable for cleaning most magnesium alloys, zinc and cadmium, and is ideal for precleaning metals prior to phosphating and painting. Does not contain free caustic, readily rinses from metal surfaces with room temperature water, and is effective from 90°-190°F/32°-88°C.
TURCO® Liquid ARR (T-4181-L)	• • •	Liquid Concentrated Immersion 50%-75% in water	Alkaline	176°-203°F 80°-95°C 15-60 minutes	TURCO® Liquid Alkaline Rust Remover (T-4181-L) is an amber, liquid compound formulated to remove rust, paints, lube oils, drawing pastes, cutting oils and protective oils from ferrous alloys by immersion methods. Will not attack ferrous alloys, magnesium alloys, stainless steels, brass, bronze or Monel alloys when used as directed. Can be used on titanium alloys when diluted to 12% to 15% in water at 158°-167°F/70°-75°C.

Typical Cold Line Process:

1. Pre-clean with TURCO® Liquid Sprayeze, or
2. Dip clean with TURCO® 5948-DPM™.
3. Rinse.
4. Use TURCO® 4181-L™ to remove dirt and scale.
5. Rinse.
6. Use TURCO® 5668™ to remove coatings for full inspection.

JET ENGINE CLEANING, HOT LINE

TURCO® Rust Bloc	• • •	Liquid Concentrated Immersion or Spray Immersion: 10%-20% in water Spray: 2%-5% in water	Alkaline	Ambient to 203°F/95°C Varies	TURCO® Rust Bloc is an alkaline liquid used as a rust inhibiting rinse additive or cleaner. It provides temporary in-plant rust protection for steel and cast iron.
TURCO® 4338-L™	•	Liquid Two-Part, Concentrated Immersion 50%-75% in water	Alkaline, Permanganate	176°-203°F 80°-95°C 30-60 minutes	TURCO® 4338-L™ is a two-part liquid alkaline permanganate formulation developed specifically for jet engine cleaning. It modifies high temperature heat scale by chemically changing the structure of the oxide deposit to one that is properly conditioned for ease of chemical removal in subsequent processing steps. Approved by Rolls-Royce, GEAE, and Pratt & Whitney.
TURCO® 4409 GL™	•	Liquid Concentrated Immersion, Spray or Hand Wipe 5%-50% in water	Acidic	Ambient to 140°F/60°C 3-10 minutes	TURCO® 4409 GL™ is a clear, colorless liquid acid cleaner and deoxidizer designed for use on ferrous and non-ferrous alloys by immersion, spray and hand wipe methods. It is not intended for use on magnesium alloys and high strength steels.
TURCO® Liquid ARR (T-4181-L)	• •	Liquid Concentrated Immersion 50%-75% in water	Alkaline	176°-203°F 80°-95°C 15-60 minutes	TURCO® Liquid Alkaline Rust Remover (T-4181-L) is an amber, liquid compound formulated to remove rust, paints, lube oils, drawing pastes, cutting oils and protective oils from ferrous alloys by immersion methods. Will not attack ferrous alloys, magnesium alloys, stainless steels, brass, bronze or Monel alloys when used as directed. Can use on titanium alloys when diluted to 12% to 15% in water at 158°-167°F/70°-75°C.
TURCO® Scale Gon 5™	•	Liquid Concentrated Immersion 20%-30% in water	Mildly Acidic	176°-194°F 80°-90°C 30 minutes	TURCO® Scale Gon 5™ is an acid activated yellow liquid used in the TURCO® Jet Engine Process to condition and remove high temperature scale from jet engine parts. Approved by Rolls-Royce, GEAE, and Pratt & Whitney.

Typical Hot Line Process:

1. Pre-clean with TURCO® Liquid Sprayeze.
2. Rinse.
3. Use TURCO® 4181-L™ to remove carbon and light scale.
4. Rinse.
5. Scale Gon 5™ acid-based scale remover.
6. Rinse.
7. Use TURCO® 4338-L™ to remove major scale.
8. Rinse.
9. Use TURCO® 4181-L™ or TURCO® 4409™ to continue scale removal.
10. Rinse.
11. Apply TURCO® Rust Bloc.

COMPRESSOR WASH

TURCO® 5884™	•	Liquid Concentrated Spray 1:1-4	Alkaline, Solvent-Based	Ambient Approx. 5 minutes	TURCO® 5884™ is a concentrated liquid cleaner that is effective in the removal of oil, salt and solid deposits from compressor blades, guide vanes and rotors of in-service jet engines. Periodic cleaning of these components is necessary to avoid power loss, abnormal temperature increases and increased fuel consumption. Approved to MIL-C-85704B Type I.
TURCO® 6783-3™ (Europe Only)	•	Liquid Concentrated Spray 10% in water	Alkaline, Water-Based	Ambient Approx. 5 minutes	TURCO® 6783-3™ is a concentrated aqueous compressor cleaner that effectively removes oil, salt and solid deposits from compressor blades, guide vanes and rotors of in-service turbine engines. Use at 10% by volume in distilled, demineralized or good drinking water. For cold weather (below 32°F/0°C), add 20% by volume isopropanol, ethanol or glycol. Meets MIL-C-85704B Type II and III.
TURCO® 6783-10™	•	Liquid Ready to Use Spray Use as Received	Alkaline, Water-Based	Ambient Approx. 5 minutes	TURCO® 6783-10™ is an aqueous compressor cleaner that effectively removes oil, salt and solid deposits from compressor blades, guide vanes and rotors of in-service turbine engines. Periodic cleaning of these components is necessary to avoid power loss, abnormal temperature increases, increased fuel consumption and excessive NOx emissions. Ready-to-use liquid form. Meets MIL-C-85704B Type II and III.
TURCO® 6783-50™	•	Liquid Concentrated Spray 20% in water	Alkaline, Water-Based	Ambient Approx. 5 minutes	TURCO® 6783-50™ is a concentrated aqueous compressor cleaner that effectively removes oil, salt and solid deposits from compressor blades, guide vanes and rotors of in-service turbine engines. Use at 20% by volume in distilled, demineralized or good drinking water. For cold weather (below 32°F/0°C), add 20% by volume isopropanol, ethanol or glycol. Meets MIL-C-85704B Type II and III.

COMPRESSOR WASH

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SURFACE TREATMENTS

Product	Applications							Characteristics				Alloys						Operation		Description	
	Metal Processing Lines	Jet Engine Cleaning	Aircraft Parts Cleaning	Aircraft Depaint & Repaint	Coolants	Aircraft Appearance	Aircraft Protection	Consistency	Form	How to Apply	Mix Ratio (product:water)	Chemistry	Aluminum	Magnesium	Stainless Steel	Titanium	Ferrous	Non-Ferrous	Temperature		Time
ACCESSORY SHOP PRODUCTS																					
TURCO® Aquasorb	•	•						Liquid	Ready to Use	Immersion, Brush or Spray	Use as Received	Petroleum Solvent	•	•	•	•	•	•	Ambient		TURCO® Aquasorb is a clear, amber liquid, formulated to impart short-term rust and corrosion protection to both ferrous and non-ferrous metals during manufacturing and overhaul. It displaces water from metal surfaces, leaving an oil-like protective film, which prevents corrosion and rusting under humid conditions. Ideal for post oil treatments, such as phosphate, and is often used on aircraft engine and wheel bearings and similar components after rework.
TURCO® Aviation	•	•	•					Powder	Concentrated	Immersion or Spray	Immersion: 30-60 g/l Spray: 7.5-15 g/l	Alkaline	•	•	•	•	•	•	Immersion: 167°-185°F 75°-85°C Spray: 158°-167°F 70°-75°C	Immersion: 2-10 minutes Spray: 30 second to 2 minutes	TURCO® Aviation is a white granulated alkaline compound formulated for the removal of mill inks, oils, shop soils and other difficult-to-remove soils from aluminum, steel, copper, magnesium, cadmium and nickel alloys.
TURCO® 4215 NC-LT™	•	•	•					Powder	Concentrated	Immersion, Spray or Ultrasonic	Immersion: 45-60 g/l Spray: 7-15 g/l Ultrasonic: 3-15 g/l	Mildly Alkaline	•	•	•	•	•	•	113°-131°F 45°-55°C	Immersion: 5-10 minutes Spray: 2-4 mins	TURCO® 4215 NC-LT™ is a white granular mix developed for cleaning ferrous and non-ferrous alloys by spray, immersion and ultrasonic methods at low temperatures. Ideal for cleaning fuel and hydraulic components and for cleaning metals prior to metal bonding.
TURCO® 5805™	•	•						Liquid	Ready to Use	Spray	Use as Received	Alkaline	•	•	•	•	•	•	Ambient	15-30 minutes	TURCO® 5805™ is a clear viscous liquid, developed specifically for cleaning and brightening jet engine thrust reversers, cowling, landing gears, etc., during overhaul.
TURCO® 5948-DPM™ Thick	•	•				•		Liquid	Concentrated	Immersion, Spray or Mop	Immersion: 1:3-20	Alkaline, Water-Based	•	•	•	•	•	•	Immersion: 149°-185°F 65°-85°C	5-15 minutes	TURCO® 5948-DPM™ Thick is an environmentally advantaged thixotropic, water-based, heavy duty aircraft cleaner. It is a blue, viscous, alkaline, concentrated compound formulated to effectively cling to painted and unpainted aircraft exterior and interior surfaces. Ideally suited for use on all jets, especially in baggage bins, flap and wheel well areas, and on engines before overhaul.
TURCO® 6802™	•							Liquid	Ready to Use	Immersion	Use as Received		•	•	•	•	•	•	Maximum 257°F/125°C	Time for wax to melt or dissolve	TURCO® 6802™ is a clear, amber liquid developed to remove platter's wax (such as Rigidex) and similar low melting stop-off compounds by immersion in the heated product. It is free of chlorinated hydrocarbons, phenols, and chromate. TURCO® 6802™ can be used on all metals.
TURCO® 9045-6™	•	•						Liquid	Ready to Use	Immersion	Use as Received	Water-Based			•	•	•		104°-140°F 40°-60°C	30 minutes to 2 hours	TURCO® 9045-6™ is a unique water-based carbon remover used to remove carbon deposits and difficult-to-remove soils found in aircraft engines. It cleans engine blocks, pistons, carburetors, transmissions, and brake assemblies. It is an effective carbon remover for jet engine overhaul. It may also remove some paints.
LANDING GEAR/THRUST REVERSER																					
TURCO® 5668™	•	•	•					Liquid	Ready to Use	Immersion	Add entire contents of container to stripping tank		•	•	•	•	•	•	158°-176°F 70°-80°C	15-60 minutes	TURCO® 5668™ is a diphasic, liquid paint remover developed to remove resistant coatings, such as aluminized silicones, polyurethanes, acrylics, epoxies and chromated primers, without using phenols, chromate, chlorinated solvents or acids. Meets all requirements of MIL-R-83936B for removal of paint from aircraft wheels, landing gear components, and other aircraft and AGE components.
TURCO® 5805™	•	•				•		Liquid	Ready to Use	Spray	Use as Received	Alkaline	•	•	•	•	•	•	Ambient	15-30 minutes	TURCO® 5805™ is a clear viscous liquid, developed specifically for cleaning and brightening jet engine thrust reversers, cowling, landing gears, etc., during overhaul.
TURCO® 5948-DPM™ Thick	•	•				•		Liquid	Concentrated	Immersion, Spray or Mop	Immersion: 1:3-20	Alkaline, Water-Based	•	•	•	•	•	•	Immersion: 149°-176°F 65°-80°C	5-15 minutes	TURCO® 5948-DPM™ Thick is an environmentally advantaged thixotropic, water-based, heavy duty aircraft cleaner. It is a blue, viscous, alkaline, concentrated compound formulated to effectively cling to painted and unpainted aircraft exterior and interior surfaces. Ideally suited for use on all jets, especially in baggage bins, flap and wheel well areas, and on engines before overhaul.
EXTERIOR WASH																					
Aerowash®	•					•		Liquid	Concentrated	Spray or Mop	5%-30% in water, depending upon soil	Alkaline, Water-Based	•	•	•	•	•	•	Ambient	Varies	Aerowash® is a concentrated liquid all-purpose maintenance cleaner. It contains a unique blend of alkaline materials, solvents and surfactants, which makes this product highly effective against a wide variety of soils. It is safe to use on all metals, glass, painted surfaces, and plastics.
TURCO® Air-Tec #23™						•		Liquid	Concentrated	Spray or Foam	1 part concentrate to 3-15 parts water	Alkaline, Water-Based	•	•	•	•	•	•	Ambient	Varies	TURCO® Air Tec #23™ is a clear, straw colored, alkaline concentrate designed to be diluted with water to clean painted and unpainted exterior aircraft surfaces by spraying or foaming methods. Meets requirements of MIL-C-87936A, Type I.
TURCO® 5948-DPM™	•	•	•			•		Liquid	Concentrated	Spray or Mop	1 part concentrate to 9-30 parts water	Alkaline, Water-Based	•	•	•	•	•	•	Ambient	Varies	TURCO® 5948-DPM™ is an alkaline, water-based, blue concentrated compound formulated to effectively clean painted and unpainted aircraft exterior and interior surfaces when diluted with water. Ideally suited for use on all models of jet aircraft. It is also designed to be used in immersion tanks for dip applications.
REMOVED COMPONENTS																					
TURCO® 5948-DPM™	•	•	•			•		Liquid	Concentrated	Immersion, Spray or Mop	Immersion: 1:3-20 Spray/mop: 1:9-30	Alkaline, Water-Based	•	•	•	•	•	•	149°-176°F 65°-80°C	Immersion: 5-15 minutes	TURCO® 5948-DPM™ is an alkaline, water-based, blue concentrated compound formulated to effectively clean painted and unpainted aircraft exterior and interior surfaces when diluted with water. Ideally suited for use on all models of jet aircraft. It is also designed to be used in immersion tanks for dip applications.
TURCO® 9045-6™	•	•	•					Liquid	Ready to Use	Immersion	Use as Received	Water-Based			•	•	•		104°-140°F 40°-60°C	30 minutes to 2 hours	TURCO® 9045-6™ is a unique water-based carbon remover used to remove carbon deposits and difficult-to-remove soils found in aircraft engines. It cleans engine blocks, pistons, carburetors, transmissions, and brake assemblies. It is an effective carbon remover for jet engine overhaul. It may also remove some paints.
DINOL REMOVER																					
TURCO® 5948-DPM™ Thick	•	•				•		Liquid	Concentrated	Immersion, Spray or Mop	Immersion: 1:3-20	Alkaline, Water-Based	•	•	•	•	•	•	Immersion: 149°-185°F 65°-85°C	5-15 minutes	TURCO® 5948-DPM™ Thick is an environmentally advantaged thixotropic, water-based, heavy duty aircraft cleaner. It is a blue, viscous, alkaline, concentrated compound formulated to effectively cling to painted and unpainted aircraft exterior and interior surfaces. Ideally suited for use on all jets, especially in baggage bins, flap and wheel well areas, and on engines before overhaul.
FLAP & WHEEL WELL																					
TURCO® 5948-DPM™ Thick	•	•				•		Liquid	Concentrated	Immersion, Spray or Mop	Immersion: 1:3-20	Alkaline, Water-Based	•	•	•	•	•	•	Immersion: 149°-176°F 65°-80°C	5-15 minutes	TURCO® 5948-DPM™ Thick is an environmentally advantaged thixotropic, water-based, heavy duty aircraft cleaner. It is a blue, viscous, alkaline, concentrated compound formulated to effectively cling to painted and unpainted aircraft exterior and interior surfaces. Ideally suited for use on all jets, especially in baggage bins, flap and wheel well areas, and on engines before overhaul.

SURFACE TREATMENTS

Product	Applications					Characteristics				Alloys					Operation		Description			
	Metal Processing Lines	Jet Engine Cleaning	Aircraft Parts Cleaning	Aircraft Depaint & Repaint	Coolants	Aircraft Appearance	Aircraft Protection	Consistency	Form	How to Apply	Mix Ratio (product:water)	Chemistry	Aluminum	Magnesium	Stainless Steel	Titanium		Ferrous	Non-Ferrous	Temperature
WHEEL & BRAKE																				
TURCO® Rust Bloc	•	•	•				Liquid	Concentrated	Immersion or Spray	Immersion: 10%-20% in water Spray: 2%-5% in water	Alkaline	•	•	•	•	•	•	Ambient to 203°F/95°C	Varies	TURCO® Rust Bloc is an alkaline liquid used as a rust inhibiting rinse additive or cleaner. It provides temporary in-plant rust protection for steel and cast iron.
TURCO® 5668™	•	•	•				Liquid	Ready to Use	Immersion	Add entire contents of container to stripping tank	Alkaline	•	•	•	•	•	•	158°-176°F 70°-80°C	15-60 minutes	TURCO® 5668™ is a diphasic, liquid paint remover developed to remove resistant coatings, such as aluminized silicones, polyurethanes, acrylics, epoxies and chromated primers without using phenols, chromate, chlorinated solvents or acids. Meets all requirements of MIL-R-83936B for removal of paint from aircraft wheels, landing gear components, and other aircraft and AGE components.
TURCO® 6751-L™	•		•				Liquid	Concentrated	Spray	1%-4% in water	Alkaline	•	•	•	•	•	•	86°-140°F 30°-60°C	1-2 minutes	TURCO® 6751-L™ is a liquid, alkaline, low temperature cleaner for spray applications. It's a brown colored liquid, developed to remove shop soils, lube oils, light drawing oils and drawing waxes from ferrous and non-ferrous metals. Rinses from metal surfaces with room temperature water and is effective from 86°-140°F/30°-60°C.
TURCO® Aviation	•	•	•				Powder	Concentrated	Immersion or Spray	Immersion: 30-60 g/l Spray: 7.5-15 g/l	Alkaline	•	•	•	•	•	•	Immersion: 167°-185°F 75°-85°C Spray: 158°-167°F 70°-75°C	Immersion: 2-10 minutes Spray: 30 second to 2 minutes	TURCO® Aviation is a white granulated alkaline compound formulated for the removal of mill inks, oils, shop soils and other difficult-to-remove soils from aluminum, steel, copper, magnesium, cadmium and nickel alloys.
TURCO® Liquid Sprayeze NP-LT™	•	•	•				Liquid	Concentrated	Immersion or Spray	Immersion: 15%-25% in water Spray: 3%-10% in water	Alkaline, Water-Based	•		•	•	•		90°-190°F 30°-90°C	Immersion: 5-30 minutes Spray: 1-2 mins	TURCO® Liquid Sprayeze NP-LT™ is a straw colored liquid, developed to remove shop soil, lube oils, light drawing oils and drawing waxes from ferrous, aluminum, copper and titanium alloys. Suitable for cleaning most magnesium alloys, zinc and cadmium, and is ideal for precleaning metals prior to phosphating and painting. Does not contain free caustic, readily rinses from metal surfaces with room temperature water, and is effective from 90°-190°F/30°-90°C.
STRIPPERS																				
TURCO® 6776-LO™	•		•	•			Liquid	Ready to Use	Spray	Use as Received	Acidic	•		•	•	•		Ambient	Varies	TURCO® 6776-LO™ environmentally advantaged paint remover is low odor, thixotropic, and developed for effective stripping of such resistant finishes as epoxies, epoxy primers, polyurethanes, and similar catalyzed paints. Offers a significant advance in work place safety. Does not contain methylene chloride, chlorinated solvents, phenols, chromates, ammonia or amines. Complies with the aircraft/aerospace NESHAP. Not recommended for use on high strength steel, or magnesium. Meets the "Effect on Metals" requirements of MIL-R-81903A.
TURCO® 6776™ Thin	•		•				Liquid	Diphase Ready to Use	Immersion	Use as Received	Acid Activated	•		•		•		68°-100°F 20°-40°C	As Needed	TURCO® 6776™ Thin is a light amber, diphasic liquid developed for removing chemical resistant paints, such as epoxies, polyurethanes and epoxy primers, from aluminum alloys, mild steels and cast iron by immersion. It operates with an oil seal to reduce odors.
TURCO® 6813-E™	•	•	•	•			Liquid	Ready to Use	Spray or Brush	Use as Received	Alkaline, Water-Based	•	•	•	•	•	•	Ambient	Varies	TURCO® 6813-E™ water-based environmentally advantaged paint remover is a viscous, pink liquid formulated to remove multiple coats of aircraft paints, such as epoxies and polyurethanes, including such resistant primers as Koroflex. Clings to vertical as well as overhead surfaces and can be used on aluminum, magnesium, cadmium plated steels and other ferrous metals.
TURCO® 6840-S™	•		•	•			Liquid	Ready to Use	Spray or Brush	Use as Received	Water-Based	•	•	•	•	•	•	85°-100°F 30°-40°C	Varies	TURCO® 6840-S™ water-based environmentally advantaged paint remover is a viscous, light purple liquid formulated to remove multiple coats of paints. Clings to vertical as well as overhead surfaces and can be used on aluminum, magnesium, cadmium plated steels and other ferrous metals.
TURCO® EA 6916™ Stripper	•		•	•			Liquid	Ready to Use	Spray	Use as Received	Acid, Water-Based	•		•	•	•		Ambient	Extended	TURCO® EA 6916™ Stripper water-based, environmentally advantaged, paint remover is low odor, thixotropic, and developed for effective stripping of such resistant finishes and epoxies, epoxy primer, polyurethanes and similar catalyzed paints. It is also effective in removing "sanding primer." Specially designed to be effective on very thick coatings, up to 25 mils or more. Remains wet and active for extended periods of time. Complies fully with the aircraft/aerospace NESHAP. Can be used on aluminum, mild steel, cast iron, and titanium. Meets the "Effect on Metals" requirements of MIL-R-81903A.
TURCO® EA 6930™ Stripper	•		•	•			Liquid	Ready to Use	Spray	Use as Received	Peroxide Activated, Water-Based	•		•	•	•		Ambient	Varies	TURCO® EA 6930™ Stripper environmentally advantaged paint remover is low odor, thixotropic, and activated by hydrogen peroxide. It was developed for effective stripping of such resistant finishes as epoxies, epoxy primers, polyurethanes, and similar catalyzed aircraft paints. Offers a significant advance in paint stripper technology. Complies fully with the aircraft/aerospace NESHAP. Meets the corrosivity requirements of TT-R-2918A.
MASKANTS																				
TURCO® Form Maskant 6914G™ and TURCO® Form Maskant 6915™	•						Liquid	Two-Part	Spray	1:1 by weight	Polyurethane-Based	•		•	•	•	•	>35°F/5°C	Cure Time: 30 seconds to 2 minutes	TURCO® Form Maskant 6914G™ and TURCO® Form Maskant 6915™ are the two components of a 100% solids, polyurethane-based, hand-strippable protective coating, which provides protection to aerospace metals during chemical and mechanical processing. These components are mixed at the point of application in a specially designed gun and cure rapidly on the metal surface. The cured film is referred to as TURCO® Form 2K Maskant.
COOLANTS, BIOSTABLE																				
Multan® Machine Coolants	•				•		Liquid	Concentrate	Circulation to Machine	Depends on specific product	Alkaline, Semi-Synthetic	•		•	•	•		Do not freeze		Multan® Machine Coolants are oil rejecting, semi-synthetic fluids designed for machining and grinding ferrous and aluminum alloys. The unique composition of corrosion inhibitors, Extreme Pressure (EP) additives, lubricity additives, biocides and bio-resistant components provide a durable low foaming product for today's light-to-heavy machining and grinding operations.

Typical Paint Stripping Process:

1. Protect surfaces that will not be stripped.
2. Apply either an acid, alkaline, or peroxide paint stripper to surface. See above list.
3. Agitate paint surface with stiff brush. Squeegee off loosened paint and rinse.
4. Follow with TURCO® 5948-DPM™ to wash prior to etching.
5. Rinse.
6. Use TURCO® Metal Glo #6 to etch metal prior to conversion coating. Follow TURCO® Metal Glo #6 application instructions.
7. Apply conversion coating. Follow instructions related to the specific TURCO® conversion coating.