

Alodine®



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Henkel

Aerospace MRO Depaint / Repaint Systems

Henkel: Your Total MRO Solutions Provider

The labor-intensive process of paint removal is made easier by Henkel's superior portfolio of high-performance solutions. Henkel's complete line of depaint and repaint systems include:

- Water-based, acidic, alkaline and peroxide-based paint removers
- Turco® Cleaners
- Turco® Deoxidizers / Brighteners
- Alodine® Conversion coatings
- Alodine® adhesion promoters

Henkel provides the most efficient and advanced chemical solutions for maintenance and overhaul of commercial, military and private aircraft.

Exterior Aircraft Cleaners & Deoxidizer / Brighteners

As a global leader, Henkel provides a wide variety of cleaners for the aerospace industry. The company's superior product portfolio is based on acid or alkaline systems designed to fit the industry's demanding requirements.

Aircraft exterior products include cleaners that remove soil and stains while protecting the aircraft's exterior surfaces, including such light metals as aluminum, magnesium and titanium. All exterior washing products, brighteners, corrosion removers and protectives are developed in close cooperation with both airframe manufacturers and fleet operators.

Whether delivered by spray or brush applications, our superior line of cleaning products can be relied upon to be safe, fast, efficient and cost-effective in cleaning aircraft exteriors, wheel wells, flaps, landing gears and engine cowlings.

Paint Removal Chemistries

Henkel's Turco® paint removal chemistries provide unprecedented performance in the surface treatment of aircrafts. Providing you secure performance and save chemistries for environmentally advantaged depaint and repaint processes.

Henkel was the first to offer MEC solvent-free paint strippers to the market. These environmentally advantaged products offer optimal performance in the depainting of aircraft surfaces and parts. Henkel paint strippers are NESHAP compliant, thixotropic products that cling to vertical surfaces, thereby improving the paint removal process.



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Approvals

These products are approved for use in Industry Standard specifications. For more specific approvals and applications, please check the applicable qualified product list or contact your local Henkel technical representative.



Alodine®



Aircraft Conversion Coatings & Adhesion Promoters

Conversion coatings and adhesion promoters are spray-on or applicator-applied coatings that enhance the adhesion of paints to metal surfaces. Henkel's Alodine® conversion coating lines improve the paint adhesion of metallic parts while providing superior corrosion protection.

Henkel's Alodine® conversion and functional coatings suitable for use on aluminum, magnesium and other non-ferrous alloys. These coatings provide improved corrosion protection and paint adhesion. Alodine® covers chrome and non-chrome technologies that serve the aerospace and defense industry.

Reasons for Chemical Paint Removal

- Reduce fuel consumption realized by the weight savings from removing excess layers of paints and primers
- Eliminate intrusion of media particulate from mechanical removal methods
- Reduce man hours over mechanical removal methods
- Allow thorough corrosion inspection capabilities

Product	Drum	Pail	Case	Kits	Aircraft Depaint and Repaint Appearance Consistency	Form	How to Apply	Mix Ratio (product : water)	Chemistry	Aluminum Composite Materials	Magnesium	Mild Steel	Stainless Steel	Titanium	Ferrous	Non-Ferrous	Temperature	Time	Description
Landing Gear																			
Turco® 5948-DPM™ Thick	•	•			• •	Liquid	Concentrated	Spray or Mop	Use as Received	Alkaline, Water-Based	•			• •	• •		Ambient	5-15 minutes	Turco® 5948 DPM™ is an environmentally advantaged, thixotropic, water-based, heavy duty aircraft cleaner. It is a blue, viscous, alkaline, water-based, 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																			
Turco® Aerowash™	•	•			•	Liquid	Concentrated	Spray or Mop	5%-30% in water, depending upon soil	Alkaline, Water-Based	•			• •	• •		Ambient	Varies	Turco® Aerowash is a concentrated liquid all-purpose maintenance cleaner that is safe to use on all metals, glass, painted surfaces and plastic. It contains a unique blend of alkaline materials, solvents and surfactants, which makes this product highly effective against a wide variety of soils.
Turco® Jet-Clean E	•	•			• •	Liquid	Concentrated	Spray or Mop	1 part concentrate to 10 parts water	Alkaline, Water-Based	•			• •	• •		Ambient	Varies	Turco® Jet Clean E is a heavy duty, general purpose liquid cleaner, safe on all painted and unpainted aircraft surfaces.
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.
Turco® 5948-R	•	•			• •	Liquid	Concentrated	Spray or Mop	3%-30% in water	Alkaline, Water-Based	•			• •	• •		Ambient	Varies	Turco® 5948-R 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 aircraft large or small, and for cleaning engine parts during engine overhaul. It is also designed to be used in immersion tanks for dip applications.
Flap & Wheel Well																			
Turco® 5948-DPM™ Thick	•	•			• •	Liquid	Concentrated	Spray or Mop	Use as Received	Alkaline, Water-Based	•			• •	• •		>65°F (18°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, water-based, 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.
Metal Brighteners																			
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 on vertical surfaces. Produces a chemically clean (water-break free) and streak-free surface when used according to directions. Can be used to clean, deoxidize and brighten aluminum surfaces prior to welding, painting or to prepare the surface for a subsequent conversion coating. This product is non-crazing to acrylics and can be used over well-bonded paints and all aircraft metals.
Turco® Metal Glo FF™ (Concentrate)	•				• •	Liquid	Concentrated	Brush or Spray	Full strength or 1:2	Acid, Solvent	•						See data sheet	See data sheet	Turco® Metal Glo FF™ is a non-flammable, non-fluoride, acid-based cleaner, brightener, deoxidizer and prepaint conditioner for aluminum. This product contains viscosity builders that allow for added contact time, enabling this product to remove corrosion from horizontal and vertical surfaces. Cleaning with deoxidizing produces a chemically clean (water-break free) and streak-free surface.
Conversion Coatings & Adhesion Promoters																			
Alodine® 1200S™		•	•		•	Powder	Concentrated	Immersion	6.3 lbs per 100 gals water	Chromate	•						70°F-100°F (21°C-38°C)	15 seconds - 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® 1000™ Liquid	•	•			•	Liquid	Concentrated	Spray or Immersion	10.0 gals per 100 gals or 10% by volume	Chromate	•						70°F-160°F (21°C-71°C)	2-5 minutes 15-30 seconds	Alodine® 1000L™ is a liquid chemical used to produce a protective coating on aluminum and aluminum alloys. This coating provides protection for aluminum and an excellent bond for organic coatings. Alodine® 1000L™ develops a clear or colorless protective coating and should be used when the characteristic aluminum appearance or finish must be retained.
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.
Alodine® T 5900™ Alodine® T 5900™ RTU	•	•			•	Liquid	Concentrated or Ready to Use	Spray, Brush or Immersion	Alodine® T 5900™: 5.0 gals per 100 gals Alodine® T 5900™ Toner: 1.0 gals per 100 gals Alodine® T 5900™ RTU: Use as Received	Tri-Chrome	•	•		•			70°F-90°F (21°C-32°C)	7-10 minutes	Alodine® T 5900™ treatment is a complex trivalent chromium conversion coating formulated for treating aluminum and its alloys, metals coated with IVI aluminum, magnesium, titanium and zinc surfaces. The process provides bare ASTM-B117 salt spray resistance and serves as an excellent base for bonding paint and adhesives. Neither the product itself nor the conversion coating developed by the process contain hexavalent chromium.
Touch-Up Conversion Coatings																			
Alodine® Magnesium Treatment Kit				• •		Liquid	Ready to Use Two-Part Kit	Kit	Use as Received	Chromate		•					Ambient	Until Dry	The Alodine® Magnesium Treatment Kit contains products formulated for treating magnesium alloys to produce a chromate conversion coating conforming 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.
Alodine® 871™ Touch-N-Prep® Coating				• •		Liquid	Ready to Use	Pen	Use as Received	Tri-Chrome	•						Ambient	Until Dry	Alodine® 871™ Touch-N-Prep® Coating pen is a non-hexavalent, tri-chrome, dry-in-place conversion coating designed for use on aluminum and its alloys. The pen used to deliver this product provides an easy and safe method of repairing bare areas of aluminum surfaces.
Alodine® 1132™ Touch-N-Prep® Coating				• •		Liquid	Ready to Use	Pen	Use as Received	Chromate	•						Ambient	Until Dry	Alodine® 1132™ Touch-N-Prep® Coating pen is a chromate, dry-in-place conversion coating designed for use on aluminum and its alloys. The pen used to deliver this product provides an easy and safe method of repairing bare areas of aluminum surfaces.
Alodine® Touch-N-Prep® Replacement Tips				• •		N/A	N/A	N/A	N/A	N/A							N/A	N/A	A felt replacement tip for use with the Alodine® Touch-N-Prep® Coating applicators.
Alodine® 1201™				• •		Liquid	BRUSH: Ready to Use	Brush or Immersion	IMMERSION: 33 parts - Alodine® 1201™ 67 parts - water	Chromate	•						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® 5700™ Wipes				• •		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.
Paint Removers																			
Turco® 1270-6™	•	•			•	Liquid	Ready to Use	Spray	Use as Received	Alkaline	• •						>68°F (20°C)	Varies	Turco® 1270-6™ is a viscous white emulsion that does not contain any of the hazardous or highly toxic components of conventional paint removers. It is free of aromatic hydrocarbons, chlorinated solvents, phenol, and chromates. It was developed as a paint softener to be used in combination with blast media and high pressure water. However, with sufficient time and/or elevated temperatures the product can remove selected paint systems without the necessity for blasting or high pressure rinsing. It is particularly effective in selective removal of topcoats from painted composites that employ a "nylon type" intermediate barrier coat. For other systems, both the topcoat and the intermediate primer may be removed, leaving the chromated primer intact.
Turco® 5351™ (T-5469)	•	•			•	Liquid	Ready to Use	Spray or Brush	Use as Received	Neutral Methylene Chloride-Based	•	•	• •	• •			>68°F (20°C)	Varies	Turco® 5351™ (T-5469) is a yellow, viscous paint remover developed to remove epoxy, polyurethane and similar coatings from metal surfaces at ambient temperatures. It clings to vertical and overhead surfaces and forms a surface film that helps retard evaporation and extend the working life of the stripper. Note: This product should not be used on material that is affected by chlorinated hydrocarbons.
Turco® 6776-LO™	•	•			•	Liquid	Ready to Use	Spray	Use as Received	Acidic	•		• •	• •			>68°F (20°C)	Varies	Turco® 6776-LO™ is an environmentally advantaged paint remover that is low odor, thixotropic, developed for effective stripping of such resistant finishes as epoxies, epoxy primers, polyurethanes, and similar catalyzed paints. Offers a significant advance in workplace safety. Does not contain methylene chloride, chlorinated solvents, phenols, chromates, ammonia or amines. Complies fully with the aircraft/aerospace NESHAP. Can be used on aluminum, mild steel, cast iron, and titanium when used as directed. Not recommended for use on high strength steel or magnesium.
Turco® 6813-E™	•	•			•	Liquid	Ready to Use	Spray or Brush	Use as Received	Alkaline, Water-Based	•	•	• •	• •			>68°F (20°C)	Varies	Turco® 6813-E™ is a water-based environmentally advantaged paint remover that 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® 6813-ED™	•				•	Liquid	Ready to Use	Spray or Brush	Use as Received	Alkaline, Water-Based	•	•	• •	• •			>68°F (20°C)	Varies	Turco® 6813-ED™ is a viscous, blue-green liquid formulated to remove multiple coats of aircraft paints, such as epoxies and polyurethanes, including such resistant primers as Koroflex. This paint remover clings to vertical as well as overhead surfaces and can be used on aluminum, magnesium, cadmium-plated steels and other ferrous metals.
Turco® 6881™	•	•			•	Liquid	Ready to Use	Spray	Use as Received	Peroxide-Activated Water-Based	•		• •	• •			>68°F (20°C)	Varies	Turco® 6881™ is an environmentally advantaged paint remover that 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 advantage in paint stripper technology. Complies fully with the aircraft/aerospace NESHAP. Can be used on aluminum, mild steel, high strength steel, and titanium when used as directed. Not recommended for use on magnesium.
Turco® EA 6930™ Stripper	•	•			•	Liquid	Ready to Use	Spray	Use as Received	Peroxide-Activated Water-Based	•		• •	• •			>68°F (20°C)	Varies	Turco® EA 6930™ Stripper is an environmentally advantaged paint remover that 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. Can be used on aluminum, mild steel, high strength steel, cadmium-plated steel and titanium when used as directed.

Aerospace Depaint/Repaint Cleaning Process



Soiled aircraft awaiting depaint/paint process



Clean with aircraft cleaners (i.e., landing gear, exterior washes, flap and wheel cleaners)



Paint removers



Metal brighteners



Conversion coatings and adhesion promoters, then prime before final topcoat



Clean, newly painted aircraft

NOTE: Follow the proper masking and safety procedures per your technical manuals prior to beginning any process.