

Anodizing and Aluminum Finishing: A Complete Portfolio

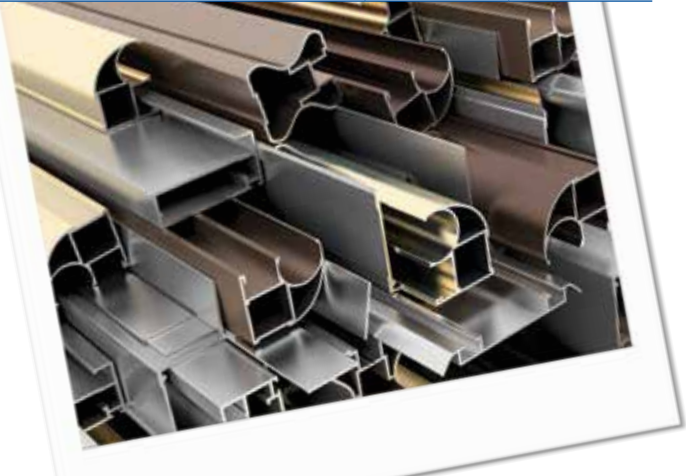
Chemetall provides a complete portfolio of environmentally sound solutions, including chrome-free, phosphorus-free, and NPE surfactant-free products as well as a full line of high performance anodizing technology. From superior cleaners to conversion coatings, Chemetall's aluminum finishing products deliver outstanding cleaning, surface finishing uniformity, and long-lasting corrosion protection.



	Spray	Immersion	Liquid	Powder	Etching	Low Etch
ALKALINE CLEANERS						
Gardoclean® 338 U Heavy-duty, etching spray cleaner. NPE surfactant-free.	+			+	+	
Gardoclean S 5339 Spray cleaner for extruded, wrought and cast alloys. Minimal surface attack. NPE surfactant-free and silicate-free.	+		+			+
Gardoclean T 5316 Non-silicated immersion cleaner for all aluminum alloys.		+	+			+
Gardoclean TP 10367 Economical, mid-duty, highly alkaline cleaner for cleaning and etching aluminum. NPE surfactant-free.	+		+		+	
Gardoclean 2500 (Inpro-Clean 2500) Heavy-duty, non-silicated spray cleaner. Minimal surface attack. NPE surfactant-free. Good for MIL-DTL-5541 chromate lines.	+			+		+
Gardoclean 3802 (Inpro-Clean 3800) Silicated cleaner, designed for removing buffing compounds. Phosphorus-free.		+	+			
Gardoclean T 5450 (Low Heat Cleaner 1) Heavy-duty, etching cleaner for immersion applications. NPE surfactant-free.		+		+	+	
Gardoclean T 61 (Oakite 61B) Inhibited, alkaline cleaner for aluminum. Great for removing stencil identification inks, oils, and shop soils. Good for MIL-DTL-5541 chromate lines. Boeing approved. NPE surfactant-free.		+		+		
Gardoclean 5846 (STC) Low foaming, premium quality detergent for the most demanding aluminum cleaning jobs.	+	+	+		+	

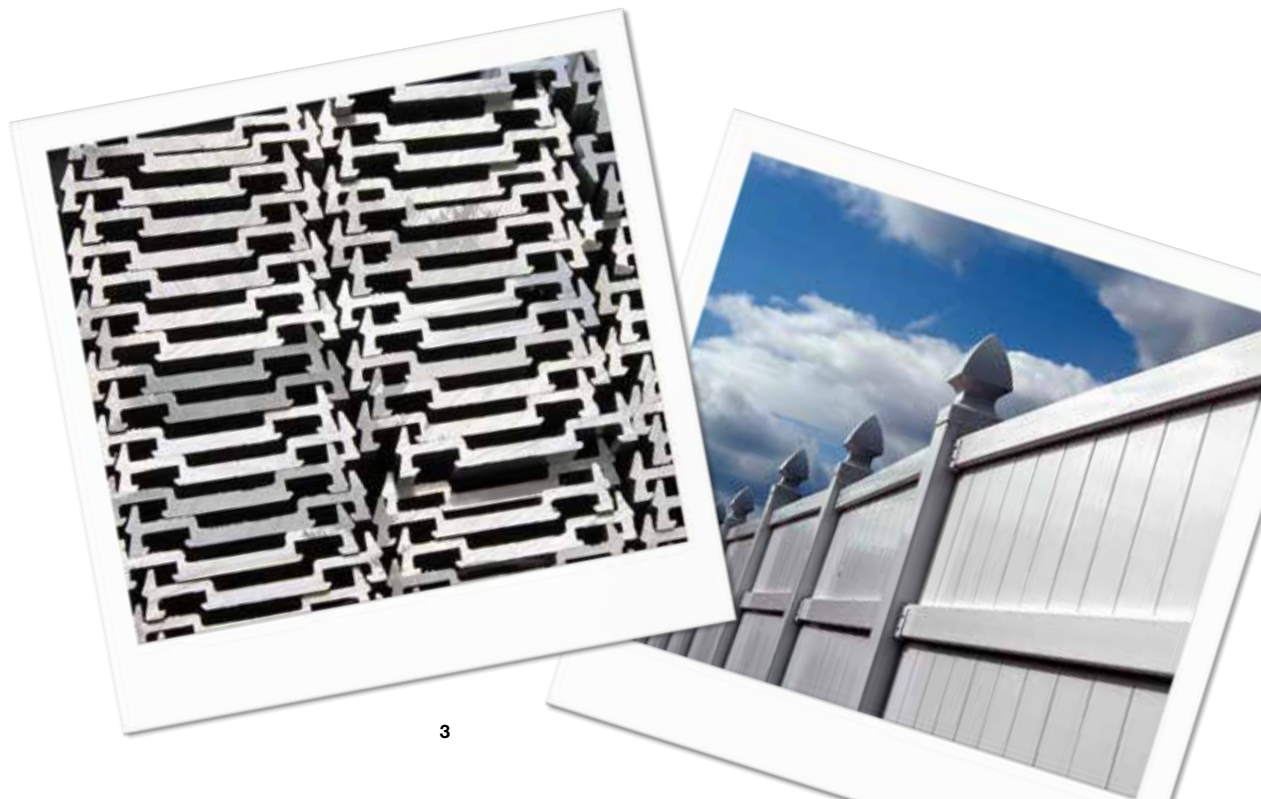
	Spray	Immersion	High Etch	Moderate Etch
ACIDIC CLEANERS				
Gardobond A 4989 (Crysoat 2147) Acidic cleaner for spray applications. Lower etch rate than Gardacid P 4462/1. NPE surfactant-free.	+			+
Gardacid® P 4307 Highly concentrated acid, used to pickle aluminum. NPE surfactant-free.	+	+	+	
Gardacid P 4462/1 Etching acidic cleaner for spray applications. Sulfuric-based. NPE surfactant-free and phosphorus-free.	+		+	
Gardacid P 4298 (TecnoClean) Specifically formulated to clean aluminum and its alloys for immersion applications. NPE surfactant-free.		+		+

	Powder	Liquid
ETCHANTS AND BRIGHTENERS		
Gardacid B 4471 Electrolytic brightener for aluminum. This ready to use product creates highly polished and reflective surfaces.		+
Gardo® Etch 8300/5 Long life additive for highly etched surfaces. Meets EURAS E6 specification. May be used in conjunction with Oakite 160 and Oakite 360L.		+
Gardo Etch 8301 High aluminum complexing additive for very lightly etched surfaces. Meets EURAS E0 specification. May be used in conjunction with Oakite 160 and Oakite 360L.		+
Gardo Etch 8315/8316 Two component, acid etch product which creates a decorative bright, yet matte finish at lower temperatures, with less metal removal than conventional alkaline etches.	+	
Gardoclean T 160 (Oakite 160) Economical etch which produces a matte finish. A chelated product which will help retard scale build up. Boeing and Lockheed Martin approved.	+	
Gardoclean T 360 (Oakite 360L) Convenient liquid formulation which combines uniform etching, with a light cleaning action.		+



	Chrome	Non-Chrome
DEOXIDIZERS		
Gardacid P 4589 (Deoxidizer 34L) Liquid product, contains no fluoride.	+	
Gardacid P 126 (Deoxidizer 126) Premium iron-free product. Add to nitric, sulfuric and/or hydrofluoric acids.		+
Gardacid P 4299 (Deoxidizer LNC) Premium, iron-based liquid deoxidizer. Boeing and Lockheed Martin approved.		+

	Chrome Phos	Cr VI	Cr III
CHROME PRETREATMENTS			
CHEMEON® TCP-HF Tri-chrome conversion coating. Meets MIL-DTL-5541F, Class 1A and Class 3 (Type II). Applied via immersion or spray.			+
CHEMEON TCP-HF EPA Additive used with TCP-HF and SP to enhance corrosion protection of copper bearing alloys.			+
Gardobond C 25 (Chromicoat L 25) Liquid chromate conversion coating. MIL-DTL-5541F approval. Meets Boeing BAC 5719.		+	
Gardobond C 640/645 (Permatreat 640/645) Conventional chrome phosphate. Meets all AAMA specifications.	+		



	Dried-In-Place	Rinsed
NON-CHROME PRETREATMENTS		
Gardobond® EPP Zirconium and titanium based. Will also treat ferrous and zinc-coated substrates. Can meet all AAMA specifications.		+
Gardobond X 4650 Zirconium based. Lower rate of attack than Okemcoat 4500. Can meet all AAMA specifications.	+	
Gardobond X 4707 Zirconium/titanium based. Limited TACOM approval for MIL-DTL-5541. Can meet AAMA specifications.		+
Gardobond X 4557 (Okemcoat 4500) Zirconium-based. Higher etch rate — good for oxidized metal. Can meet all AAMA specifications.	+	
Oxsilan® 9802 Phosphorus-free, silane based coating that's applied at ambient temperature. Will also treat ferrous and zinc-coated substrates.		+

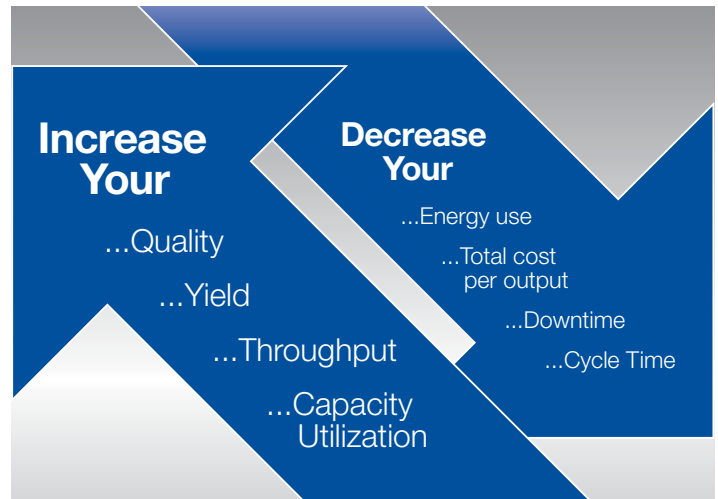
	Powder	Liquid
ANODIZING ADDITIVES		
Gardobond Additive H 7525 Additive for anodizing at higher temperatures, 7XXX series alloys and high current densities.	+	
Gardobond Additive H 7525/2 Anti-fume, mist control.		+
Gardobond Additive H 7526 Additive for anodizing at higher temperatures, 7XXX series alloys and high current densities.		+



	Powder	Liquid
COLORS AND SEALS		
Gardobond Additive H 7533 Surface tension reducer for hot sealing.		+
Gardo Color 7720 Electroless, Iron Oxalate based, gold coloring additive. Produces a light Silver to light Brass tone.	+	
Gardo Color 7721 Dispersant and anti-oxidant for Tin Sulfate 2-step coloring.		+
Gardo Color 7722 Stabilizer for Tin Sulfate/Sulfuric based 2-step coloring.		+
Gardo Color 7726 Tin additive with stabilizer. Iron containing. Used to achieve Bronze tones.		+
Gardo Color 7727 Tin additive with stabilizer. Iron-free. Used to achieve Bronze tones.		+
Gardo Seal 1947 Nickel based, cold seal. Specially designed for high production/high contamination plants.		+
Gardo Seal 1958 High performance hot seal additive to control blooming.		+
Gardo Seal 1999 Mid-temperature seal. Free of heavy metals.		+



Cut it. Clean it. Coat it. Control it. Conserve it.® with us!



Meet your needs with our 6 Point Total Value Proposition

- Point 1.** Dedicated, Global Specialists Locally Available
- Point 2.** Focused, Passionate, and Accountable Expert Support
- Point 3.** Integrated Portfolio of Innovative Products
- Point 4.** High Quality Standards
- Point 5.** Fast and Accurate Labs
- Point 6.** Comprehensive Collaboration for Efficient Process Performance

The Surface Treatment global business unit of the Coatings division of BASF, operating under the Chemetall brand, is a leading supplier of applied surface treatments and services for metal, plastic, and glass substrates in a vast range of industries and end markets. Chemetall Surface Treatment products are used for a variety of applications. As an integrated part of the business, we offer a full range of services, including process control and on-site support at customers' facilities with local representation worldwide. Beyond local technical expertise, systems are designed to meet the final requirements of the treated products.

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