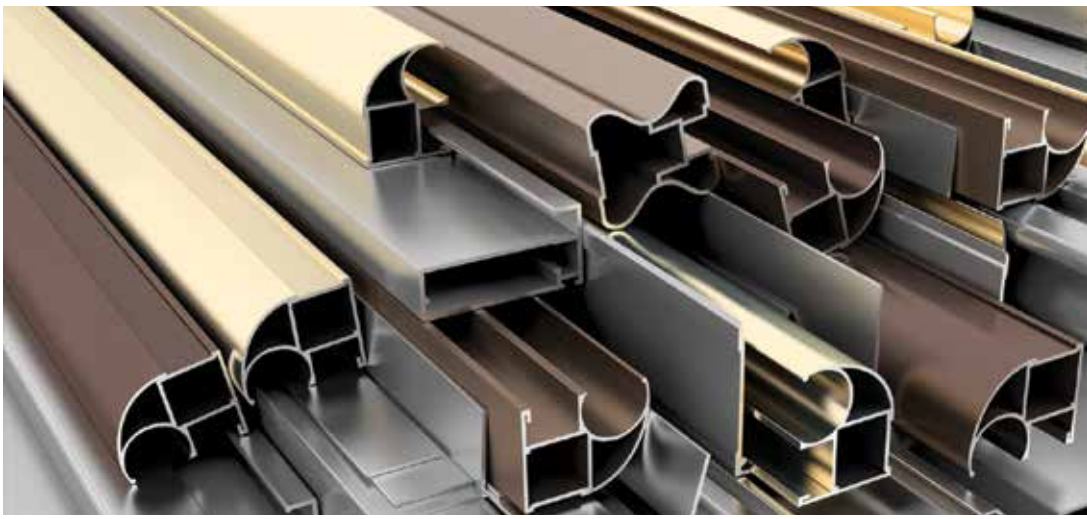
Architectural Aluminum Finishing

Anodizing Solutions
Pretreatments for Wet Paint and Powder Coating



Chemetall has been providing unique surface treatment solutions for over 100 years and we strive to provide the same long-lasting finish and appearance to your architectural aluminum products. Whether you anodize, wet paint, or powder coat architectural aluminum, Chemetall surface treatments will provide you with unmatched durability, appearance, and function that will stand the test of time.

- Dedicated experts locally available for on-site support
- Effortlessly meet industry specifications (AAMA)
- Complete product portfolio uniquely positioned to optimize your processes
- Increase quality, throughput, and sustainability

BASF
We create chemistry

Chemetall
expect more

	Liquid	Powder	Medium Duty Etch	Light Duty Etch	Typical Operation		Packaging
					Concentration	Temperature	
ALKALINE SPRAY CLEANERS							
GardoClean® S 5339 Moderately alkaline liquid spray cleaner for medium duty cleaning and light etching of aluminum.	✚			✚	1–5%	120–140°F	Pail, Drum, Tote
GardoClean 5846 A low-foaming, highly alkaline premium-quality detergent designed to do the most demanding cleaning jobs at temperatures as low as 90°F. Gardoclean 5846 works well in hard water and rinses freely.	✚		✚		1–4%	90–140°F	Pail, Drum, Tote
GardoClean TP 10367 Economical, highly alkaline liquid spray cleaner for heavy duty cleaning and moderate etching of aluminum.	✚		✚		1–3%	100–180°F	Pail, Drum, Tote

	Liquid	Powder	Medium Duty Etch	Light Duty Etch	Typical Operation		Packaging
					Concentration	Temperature	
ALKALINE IMMERSION CLEANERS							
GardoClean T 166 Where a powder formulation is desired, Gardoclean T 166 combines exceptional cleaning ability with a high degree of safety to aluminum. It's ideal for cleaning prior to pretreatment or anodizing.		✚			6–8 oz/gal	100–180°F	Pail, Drum, Tote
GardoClean T 5316 Moderately alkaline liquid immersion cleaner for medium duty cleaning, light etching, and brightening of aluminum.	✚			✚	5–7%	85–130°F	Pail, Drum, Tote
GardoClean 5846 A low-foaming, highly alkaline, premium-quality detergent designed to do the most demanding cleaning jobs at temperatures as low as 90°F. Gardoclean 5846 works well in hard water and rinses freely.	✚		✚		2–5%	90–140°F	Pail, Drum, Tote
GardoClean T 5847 Moderately alkaline liquid immersion cleaner for medium duty cleaning, light etching, and brightening of aluminum.	✚			✚	5–7%	120–140°F	Pail, Drum, Tote

	Spray	Immersion	Heavy Duty Etch	Medium Duty Etch	Typical Operation		Packaging
					Concentration	Temperature	
ACID CLEANERS							
Gardacid® P 4298 Specifically formulated to clean and slightly etch aluminum and its alloys prior to pretreatment.	⊕	⊕		⊕	2–10%	70–120°F	Pail, Drum
Gardacid P 4307 Highly concentrated acid used to remove light soils, etch, and pickle aluminum.	⊕	⊕	⊕		2–3%	Ambient to 100°F	Pail, Drum, Tote
Gardacid P 4432 Ideal prior to pretreatment in a powder or wet paint process. Gardacid P 4432 does not contain any surfactants, but when combined with a Chemetall surfactant, it can be used for acid etching and cleaning in a single step.	⊕	⊕	⊕		2–10%	85–110°F	Pail, Drum
Gardacid P 4462/1 Highly concentrated sulfuric-based, hydrofluoric acid-free acid cleaner used to remove light soils, etch, and aluminum.	⊕	⊕	⊕		1–5%	75–150°F	Pail, Drum, Tote

	Alkaline	Acidic	Powder	Liquid	Typical Operation		Packaging
					Concentration	Temperature	
DECORATIVE ETCH							
Gardo® Etch 8300/5 Long life liquid etch additive used in conjunction with caustic, Gardoclean T 360 or Gardoclean T 160. Dissolved aluminum content up to 150–200 g/l.	⊕	⊕		⊕	25 g/l	130–150°F	Pail, Drum
Gardo Etch 8315/8319 Highly effective two component, acid etch product which creates a very matte, fine-grained, and uniform surface finish on aluminum prior to anodizing. Gardo Etch 8315/8319 is able to conceal surface die lines and minor scratches without a high aluminum removal rate. Lowers temperature, reduces time, and greatly reduces sludge generation, when compared to alkaline type etch products. *Denotes Gardo Etch 8319		⊕	⊕	⊕*	25–45 g/l Free Fluoride	90–120°F	Drum*, Tote
GardoClean T 160 Economical powdered etch which produces a matte finish. A chelated product that helps retard scale build up.	⊕		⊕		1–10%	70–120°F	Pail, Drum, Tote
GardoClean T 360 Convenient liquid formulation, highly alkaline etch, which combines uniform etching with light cleaning action.	⊕			⊕	1–10%	70–120°F	Pail, Drum, Tote

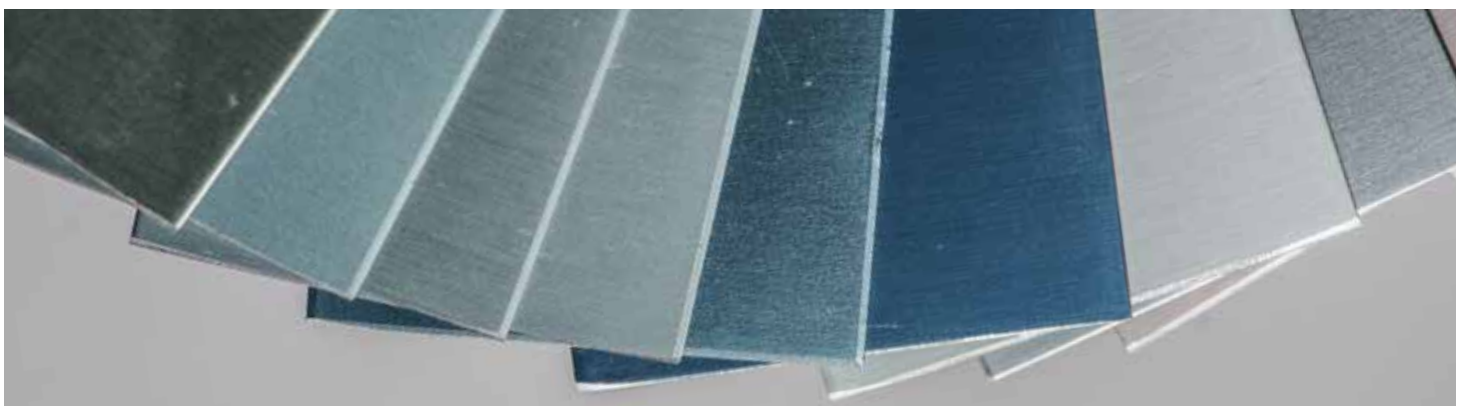
	Iron	Iron-Free	Typical Operation		Packaging
			Concentration	Temperature	
DEOXIDIZERS					
Gardacid P 126 Premium iron-free additive for removing oxides, alkaline etching smut, and discoloration from aluminum and aluminum alloys. Add to nitric, sulfuric, hydrofluoric, or mixture of these acids.		+	5–10%	60–90°F	Pail, Drum, Tote
Gardacid P 4299 Premium, iron-based liquid deoxidize for removing oxides, alkaline etching smut, and discoloration from aluminum and aluminum alloys.	+		10–20%	50–100°F	Pail, Drum, Tote

	Chrome Phosphate	Chromium (III)	Typical Operation		Packaging
			Concentration	Temperature	
CHROME PRETREATMENTS					
Gardobond® C 640/645 The 640/645 process is a conventionally applied chrome phosphate process applied by spray or immersion, used to produce an inorganic chrome phosphate coating on aluminum alloys.	+		2–3%	100–120°F	Drum
Gardobond C 4749 Gardobond C 4749 is a Chromium (III) and Zirconium containing process for aluminum and its alloys. Gardobond C 4749 serves as a pre-treatment prior to painting. The coatings produced with Gardobond C 4749 are colorless to iridescent.		+	3–6%	70–85°F	Drum

All chrome pretreatments listed above meet AAMA 2603/2604/2605 specifications.

	Dried in-place	Rinsed	Typical Operation		Packaging
			Concentration	Temperature	
NON-CHROME PRETREATMENTS					
Gardobond X 4557 Based on Zirconium, Gardobond X 4557 is a liquid formulation used to produce a coating on aluminum extrusions in a spray or immersion process. Produces a higher etch rate than Gardobond X 4650, suitable for oxidized metal.	+		1–2%	70–120°F	Pail, Drum, Tote
Gardobond X 4650 Based on Zirconium, Gardobond X 4650 is a liquid hydrofluoric acid-free formulation used to produce a coating on aluminum extrusions in spray or immersion process.	+		1–2%	70–120°F	Pail, Drum, Tote
Gardobond 4707 Chromium-free process for the treatment of aluminum profiles by immersion or spray.		+	3–15 g/l	Ambient	Drum
Gardobond X 4707 E18 Based on Titanium and Zirconium, Gardobond X 4707 E18 is a liquid hydrofluoric acid-free formulation used to produce a coating on aluminum extrusions in spray or immersion processes.	+		~1%	60–85°F	Pail, Drum, Tote

All non-chrome pretreatments listed above meet AAMA 2603/2604/2605 specifications.



	Powder	Liquid	Typical Operation		Packaging
			Concentration	Temperature	
ELECTRO COLOR					
Gardo Color 7726 Liquid tin(II)-sulphate additive to sulfuric acid for the electrolytic coloring of anodized aluminum utilizing tin electrodes. Gardo Color7726 consists of tin(II)-sulphate, antioxidant agents, and additives for enhanced throwing power produces colors from champagne to black.		⊕	70–110 g/l	Ambient	Drum
Gardo Color 7727 Liquid single pack formulation including sulfuric acid for the electrolytic coloring of anodized aluminum utilizing stainless steel or graphite electrodes. Utilized in high demand applications, Gardo Color 7727 achieves high performance coloring from champagne to black.		⊕	70–110 g/l	Ambient	Drum

	Nickel	No Metal	Typical Operation		Packaging
			Concentration	Temperature	
ANODIZE SEALS					
Gardo Seal 1958 High performance liquid additive for hot DI water seal to control blooming. Specifications: weight loss and dye spot tests are reliably fulfilled.		⊕	.1–.3%	>205°F	Pail, Drum
Gardo Seal Z 1959 High performance liquid nickel seal suitable for outdoor exposure including clear and 2 step coloring of architectural building envelopes. It is also suitable to seal organic dyestuffs.	⊕		2.5%	185–195°F	Pail, Drum, Tote
Gardo Seal 1999 Liquid additive free of heavy metals for the prevention of blooming during the mid-temp water sealing of anodized aluminum.		⊕	.5–3%	>185°F	Pail, Drum

All anodize seals listed above meet AAMA 611/612 specifications.

We are dedicated to our Architectural Aluminum Finishing customers!

Solutions for every challenge.

Get a risk-free audit to demonstrate our dedication and close collaboration!

- Experience a reliable and accurate assessment of your production processes
- Gain insights into sustainable and efficient process solutions
- Unlock industry insights with our global expertise
- Save cost, water, and energy

Cut it. Clean it. Coat it. Control it. Conserve it.

North American Headquarters
675 Central Avenue
New Providence, NJ 07974
Tel: 908-464-6900
Toll-free: 800-526-4473
Fax: 908-464-7914

www.ChemetallNA.com

Chemetall Canada Limited
5025 Creekbank Road,
Building A, Floor 2
Mississauga, Ontario, Canada
L4W 0B6
Tel: 905-791-1628
Toll-free: 877-311-1471

Chemetall Mexicana, S.A. de C.V.
Avenida El Tepeyac No. 1420-B
Parque Industrial O'Donnell-Aeropuerto
El Marqués, Querétaro
C.P. 76250, México
Querétaro Tel: +52 (442) 227 2000
Monterrey Tel: +52 (81) 8371 2517

Chemetall U.S.
1100 Technology Drive
Jackson, MI 49201
Tel: 517-787-4846
Toll-free: 877-941-3800
Fax: 517-787-5538