

Surface Treatment Products

Chemetall surface treatment products provide to the full spectrum of metal finishers unparalleled performance through superior service, combined with products that have been developed with cost, process simplicity and worker and environmental safety foremost in mind. From green phosphorus-free cleaners to high-performance final seals, Chemetall has the right process for you.



	Spray	Immersion	Liquid	Powder	Steel	Multi-Metal
ALKALINE CLEANERS						
Gardoclean® S 5413 (Low Heat Cleaner 3) Heavy-duty, highly alkaline cleaner for removing oils, metal forming fluids, and burnt-on soils. NPE surfactant-free and silicate-free.	+		+		+	
Gardoclean S 4893 (Low Heat Cleaner 5) Heavy-duty, highly alkaline cleaner for removing oils, metal forming fluids and burnt-on soils. Silicate-free and phosphorus-free.	+		+		+	
Gardoclean 5846 (STC) Heavy-duty, highly alkaline cleaner for removing oils, metal forming fluids, and burnt-on soils. NPE surfactant-free and silicate-free.	+	+	+		+	
Gardoclean S 5192 Heavy-duty, silicated, alkaline cleaner for removing oils, metal forming fluids, etc. EDTA chelate-free and phosphorus-free.	+	+	+			+
Gardoclean S 5355 Moderate-duty, pH 10, alkaline cleaner for removing oils, metal forming fluids, etc. from a variety of metals. Phosphorus-free. Biodegradable.	+		+			+
Gardoclean S 5219 Moderate-duty, non-silicated, worker-friendly pH 9, alkaline cleaner for removing oils, metal forming fluids, etc. from a variety of metals.	+		+			+
Gardoclean 2500 (Inpro-Clean 2500) Heavy-duty, non-silicated, low-foaming, mildly alkaline cleaner for removing heavy soils, metalworking fluids, oil, and grease compounds.	+			+		+
Gardoclean 3802 (Inpro-Clean 3800) Moderate-duty, phosphorus free, alkaline cleaner for removing buffing compounds, oil, grease, and metalworking fluids.		+	+			+
Gardoclean T 5316 Moderate-duty, non-silicated, pH 9-10, designed for cleaning aluminum sheets, castings and extrusions. Effective in hard water.		+	+			+
Gardoclean T 5386 (HD126) Heavy-duty, low-silicated, alkaline cleaner for removal of grease, oil, and carbonaceous soils. High-temperature stable.		+		+	+	
Gardoclean T 61 (Oakite 61B) Inhibited, alkaline cleaner for aluminum. Good for MIL-DTL-5541 chromate lines. Boeing approved. NPE surfactant-free.		+		+		+

LASER SCALE/RUST REMOVERS

Gardacid® P 207 (Acid Clean GB 207)

Citric acid based. Doesn't form scale; very little sludge. Resists flash rust. Mainly for steel. Passivates stainless steel.

Gardacid P 4354

Phosphoric and sulfuric acid based. Doesn't form scale; very little sludge. Benefits of two acids. Mainly for steel.

Gardacid P 4462/1

Sulfuric acid based. Doesn't form scale; very little sludge. Very economical. Mainly for steel.

Gardacid P 4444

Citric and sulfuric acid based. Doesn't form scale; very little sludge. Benefits of two acids. Mainly for steel.

Gardacid P 4442

Phosphoric acid based. Resists flash rust. Very effective. For steel and aluminum.

Gardacid P 4477

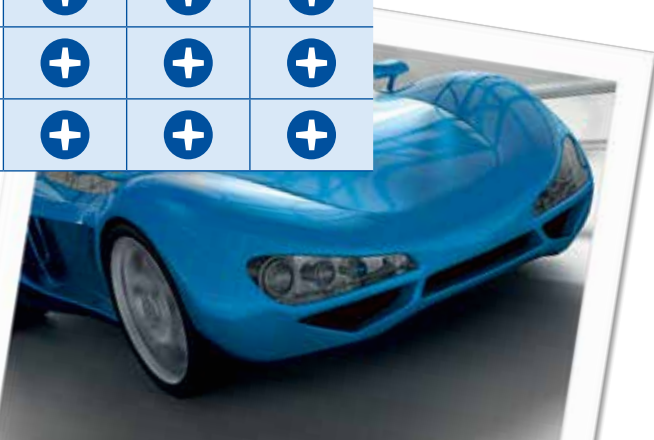
Phosphoric and sulfuric acid based. Doesn't form scale; very little sludge. Benefits of two acids. Mainly for steel.

ALKALINE NEUTRALIZERS (AFTER ACID PICKLING)

Gardacid P 4354

Phosphoric and sulfuric acid based. Doesn't form scale; very little sludge. Benefits of two acids. Mainly for steel.

	Fe	Al	Zn
ADVANCED PRETREATMENTS			
Gardobond® AP 9809 Iron phosphate replacement, phosphorus-free, for 3-stage lines, mild steel and tap water compatible. Mildly alkaline. Can be used dry-in-place.	+	+	+
Gardobond AP 9811 Iron phosphate replacement, phosphorus-free, for 3-stage lines, mild steel and tap water compatible. Mildly acidic. Can be used dry-in-place.	+	+	+
Gardobond AP 9840 Phosphorus-free, cleaner-coater, for 3-stage lines, mild steel and tap water compatible. Mildly acidic.	+	+	+
Gardobond EPP Iron phosphate replacement, low-phosphorus, for 5-stage lines, mild steel and tap water compatible.	+	+	+
Gardobond X 4548 Phosphorus-free all inorganic pretreatment. Can be used as a cleaner-coater. Mild steel and tap water compatible.	+	+	+
Oxsilan® 9800 Iron phosphate replacement, phosphorus-free, for ferrous lines and for most multi-metal lines.	+	+	+
Oxsilan 9802 Iron phosphate replacement, phosphorus-free, for lines that are mostly non-ferrous. Excellent performance on magnesium.		+	+
Oxsilan 9810/2 Zinc phosphate replacement, phosphorus-free, good for e-coat, MIL-spec approved.	+	+	+
Oxsilan 9814 Zinc phosphate replacement, phosphorus-free, good for e-coat. Highest performance.	+	+	+
Oxsilan MM-0705 Phosphorus-free pretreatment for rubber-to-metal bonding.	+	+	+



	Cleaner	Multi-Metal	Spray	Immersion	Manual
IRON PHOSPHATES					
Gardobond A 3015 (Chem Cote 3015) Cleans and produces an iron phosphate coating on steel. Superior paint adhesion and corrosion resistance. Especially suited for surface water, DI or RO water.	+	+	+		
Gardobond A 3026 (Chem Cote 3026) Cleans and produces an iron phosphate coating on iron and steel. Provides superior paint adhesion and corrosion resistance.	+		+		
Gardobond A 3010 (Chem Cote 3010) Non-foaming, five-stage iron phosphate pretreatment primarily for steel. Provides superior paint adhesion and corrosion resistance.			+	+	
Gardobond A 2217 (Crysocoat 2707) Energy-saving low-temperature, three-stage iron phosphate pre-paint preparation for cleaning and coating mixed runs of metal. Molybdate-free.	+	+	+		
Gardobond A 2217/1 (Crysocoat 2707 FF) Energy-saving low-temperature, three-stage iron phosphate pre-paint preparation for cleaning and coating mixed runs of metal. Molybdate-free, fluoride-free.	+		+		
Gardobond A 4989 (Crysocoat 2147) Applicable in a three or five-stage process, simultaneously cleans and coats metals at low-temperature. Provides superior paint adhesion and corrosion resistance.	+	+	+		
Gardobond A 2187 (Crysocoat 2187) Applicable in a three or five-stage process, simultaneously cleans and coats metals at low-temperature. Provides superior paint adhesion and corrosion resistance.	+	+		+	
Gardobond A 4961 One-step product to clean and prepare large parts for painting. Can be used as a no-rinse. Increases paint adhesion. Superior salt spray and minimal flash rust.	+				+
Gardobond A 2101 (Crysocoat 2100 SC) High-performance product used to simultaneously clean and prepare large parts for painting. Superior corrosion resistance and increased paint adhesion.	+				+
Gardobond A 3406 (Chem Cote 3406) Simultaneously cleans and prepares large parts for painting. Increases paint corrosion resistance and adhesion. Flash rust resistant and tolerant of incomplete rinsing.	+				+

	Liquid	Powder
ACTIVATORS / GRAIN REFINERS		
Gardolene V 6522 Activating pre-rinse for metal surfaces prior to zinc phosphating. Good for hard water.		+
Gardolene V 6513 Activating pre-rinse for metal surfaces prior to zinc phosphating. Superior performance and long bath life.		+
Gardolene V 6599 Activating pre-rinse for metal surfaces prior to zinc phosphating. Superior performance and long bath life.	+	
Gardolene V 6559 Activating pre-rinse for metal surfaces prior to zinc phosphating. Highest performance and long bath life. Zinc-based.	+	
Gardolene V 6560 A and V 6561 B Activating pre-rinses for iron and steel surfaces prior to Gardobond manganese phosphating processes.		+



	Spray	Immersion	Steel	Zinc	Aluminum
ZINC PHOSPHATES					
Gardobond R 2219 (Crysocoat MP) Robust, low-temperature, general-purpose zinc phosphate for pre-paint treatment of steel, zinc, and aluminum. Meets Boeing BAC 5810 specification.	+	+	+	+	+
Gardobond A 4830 (Crysocoat FG) Nickel-free, low-temperature zinc phosphate for pre-paint treatment of steel and aluminum.	+	+	+		+
Gardobond R 2606 (Crysocoat LWT) Internally accelerated, low-temperature, zinc phosphate for steel and aluminum. Low sludge.	+		+		+
Gardobond R 400 (Crysocoat ZS 400) Robust, low-temperature, zinc phosphate for pre-paint treatment of steel, zinc, and aluminum. Good for difficult, hardened alloy steel, such as military items. Meets TT-C-490.	+	+	+	+	+
Gardobond 24 S Manganese-modified, high performance, low-zinc phosphate process for steel, aluminum, and zinc. Suitable prior to conventional or electrophoretic painting.	+		+	+	+
Gardobond 24 T Manganese-modified, high performance, low-zinc phosphate process for steel, aluminum, and zinc. Suitable prior to conventional or electrophoretic painting.		+	+	+	+
Gardobond R 4828 (Crysocoat CM) Calcium-modified, zinc phosphate for pre-treatment of steel. Good for rubber-to-metal bonding. Extremely fine-grained coatings without the use of a grain-refining activator.		+	+		
Gardobond R 4803 (Crysocoat OC) Heavy zinc phosphate for zinc and oil coating of ferrous surfaces.		+	+		
Gardobond R 4804 (Crysocoat XH) Heavy zinc phosphate for zinc and oil coating of ferrous surfaces. Especially good for hardened steel, such as military items. Highest coating weight. Meets MIL-DTL-16232.		+	+		

	Non-chrome	Steel
FINAL SEALS		
Gardolene D 6800/6 High-performance, zirconium-based, acidic final seal used after zinc and iron phosphates.	+	
Gardolene D 6810 Economical, zirconium-based, acidic final seal used after iron and zinc phosphates.	+	
Tech Seal™ 38645 High-performance, zirconium and silane-based acidic final seal used after iron and zinc phosphates.	+	
Gardolene D 6871 High-performance, silane-based, slightly alkaline final seal used after iron and zinc phosphates.	+	
Gardolene 60/1 Hexavalent / trivalent chrome final rinse for phosphated or chromated metal surfaces.		+



MANGANESE PHOSPHATES

Gardobond G 4040

Low-temperature, manganese phosphate for iron and steel to reduce friction during break-in periods. Operates at energy-saving temperatures as low as 180°F.

Gardobond G 4041

Nickel-free, manganese phosphate for iron and steel to reduce friction during break-in periods. Operates at energy-saving temperatures as low as 180°F.

Gardobond G 4098

Manganese phosphate for iron and steel to reduce friction during break-in periods. Conventional high-temperature, high-coating weight process.

Gardobond Additive H 7050

Unique additive used in the Gardobond manganese phosphate solution, greatly reduces processing time, generates finer coatings.

PLASTICS CLEANING

Gardoprep® 5543

Phosphorus-free acidic cleaner. Low temperature.

Gardoprep 5635/1

Liquid, Low temperature plastic cleaner.

Gardoclean® T 3803 (Permatreat 326)

Phosphorus-free acid cleaner, automotive approved.

Gardoprep 4552 (Polytex)

Conventional phosphoric acid-based cleaner.

Gardoprep 4553 (Polytex Rinse)

Rinse aid to improve water drainage and reduce water spotting.

DESCALERS FOR PROCESS EQUIPMENT

Gardoclean R 1700 F

Liquid, alkaline product, for removing scale and other contaminants from steel and stainless steel spray washers, immersion process lines, and heat exchangers.



Gardacid P 4309

Liquid, highly concentrated, sulfuric acid product that removes scale from stainless steel spray washers, immersion process lines.



Gardacid P 4460

Liquid, highly concentrated, sulfuric acid blend that removes scale from stainless steel spray washers, immersion process lines. Especially good for zinc phosphate scale when running aluminum.

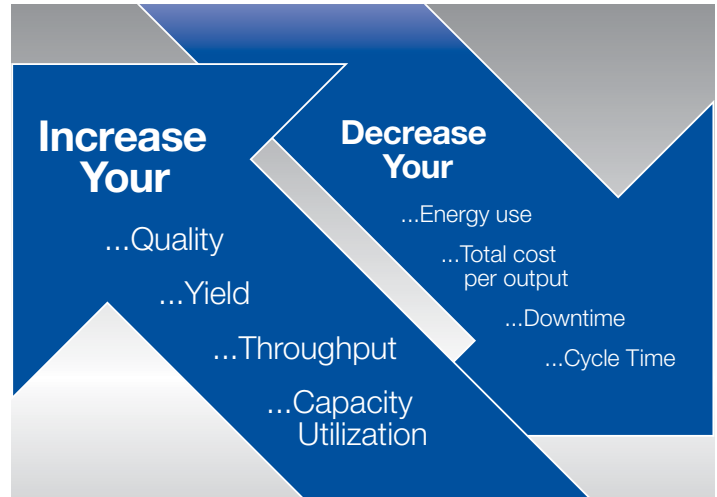


Gardobond Additive H 7140/1

Liquid, nitric acid product that removes scale from stainless steel spray washers, immersion process lines, and heat exchangers. Packaged in economical and convenient polyethylene containers.



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.

Chemetall is proud to serve North America from the following locations

North American Headquarters

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

Chemetall Canada Limited

100 Milverton Drive,
5th Floor,
Mississauga, Ontario,
Canada
L5R 4H1
Tel: 1-905-791-1628
Toll-free: 1-877-311-1471

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

Chemetall U.S.

46716 Lakeview Blvd.
Fremont, CA 94538
Tel: 408-387-5340
Fax: 408-809-2883

www.ChemetallINA.com

The product information contained in this brochure has been compiled to the best of our knowledge on the basis of thorough tests and research work and with regard to the current state of our practical experience in the industry. This product information is non-binding. Our statements relating to possible uses of the product do not constitute a guarantee that such uses are appropriate in a particular user's case or that such uses do not infringe the patents or proprietary rights of any third party. The user should undertake sufficient verification and testing to determine the suitability of the product for its particular purpose. We assume no risk or liability whatever in connection with any particular use, if not expressly confirmed by us in writing. Therefore, Chemetall grants no warranty and does not accept any liability in connection with this product information or its use. Except where noted otherwise, all registered trademarks are owned by Chemetall or its affiliated companies. The reproduction of any or all of the information contained in this brochure is expressly forbidden without Chemetall's prior written consent.