

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

## LASER SCALE/RUST REMOVERS

### 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 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)

### Gardolene® VP 4430 U

Premium product, contains rust inhibiting salts to eliminate flash rust. Liquid.

## 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.

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

	Cleaner	Multi-Metal	Spray	Immersion	Manual
<b>IRON PHOSPHATES</b>					
<b>Chem Cote™ 3015</b> Cleans and produces an iron phosphate coating on steel. Superior paint adhesion and corrosion resistance. Especially suited for surface water, DI or RO water.	+	+	+		
<b>Chem Cote 3026</b> Cleans and produces an iron phosphate coating on iron and steel. Provides superior paint adhesion and corrosion resistance.	+		+		
<b>Chem Cote 3010</b> Non-foaming, five-stage iron phosphate pretreatment primarily for steel. Provides superior paint adhesion and corrosion resistance.			+	+	
<b>CrysCoat™ 2707</b> Energy-saving low-temperature, three-stage iron phosphate pre-paint preparation for cleaning and coating mixed runs of metal. Molybdate-free.	+	+	+		
<b>CrysCoat 2707 FF</b> Energy-saving low-temperature, three-stage iron phosphate pre-paint preparation for cleaning and coating mixed runs of metal. Molybdate-free, fluoride-free.	+		+		
<b>CrysCoat 2147</b> Applicable in a three or five-stage process, simultaneously cleans and coats metals at low-temperature. Provides superior paint adhesion and corrosion resistance.	+	+	+		
<b>CrysCoat 2187</b> Applicable in a three or five-stage process, simultaneously cleans and coats metals at low-temperature. Provides superior paint adhesion and corrosion resistance.	+	+		+	
<b>Gardobond A 4961</b> 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.	+				+
<b>CrysCoat 2100 SC</b> High-performance product used to simultaneously clean and prepare large parts for painting. Superior corrosion resistance and increased paint adhesion.	+				+
<b>Chem Cote 3406</b> Simultaneously cleans and prepares large parts for painting. Increases paint corrosion resistance and adhesion. Flash rust resistant and tolerant of incomplete rinsing.	+				+

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

	Spray	Immersion	Steel	Zinc	Aluminum
<b>ZINC PHOSPHATES</b>					
<b>CrysCoat MP</b> Robust, low-temperature, general-purpose zinc phosphate for pre-paint treatment of steel, zinc, and aluminum. Meets Boeing BAC 5810 specification.	+	+	+	+	+
<b>CrysCoat FG</b> Nickel-free, low-temperature zinc phosphate for pre-paint treatment of steel and aluminum.	+	+	+		+
<b>CrysCoat LWT</b> Internally accelerated, low-temperature, zinc phosphate for steel and aluminum. Low sludge.	+		+		+
<b>CrysCoat ZS 400</b> 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.	+	+	+	+	+
<b>Gardobond 24 S</b> Manganese-modified, high performance, low-zinc phosphate process for steel, aluminum, and zinc. Suitable prior to conventional or electrophoretic painting.	+		+	+	+
<b>Gardobond 24 T</b> Manganese-modified, high performance, low-zinc phosphate process for steel, aluminum, and zinc. Suitable prior to conventional or electrophoretic painting.		+	+	+	+
<b>Gardobond R 2236</b> Manganese-modified, high performance, low-zinc phosphate process. Suitable prior to conventional or electrophoretic painting. Nickel-free.		+	+		+
<b>CrysCoat CM</b> 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.		+	+		
<b>CrysCoat OC</b> Heavy zinc phosphate for zinc and oil coating of ferrous surfaces.		+	+		
<b>CrysCoat XH</b> 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.		+	+		
<b>Gardobond X 3250</b> Heavy zinc phosphate for zinc and oil coating of ferrous surfaces, nickel-free.		+	+		

	Non-chrome	Steel
<b>FINAL SEALS</b>		
<b>Gardolene D 6800/6</b> High-performance, zirconium-based, acidic final seal used after zinc and iron phosphates.	+	
<b>Gardolene D 6810</b> Economical, zirconium-based, acidic final seal used after iron and zinc phosphates.	+	
<b>Tech Seal™ 38645</b> High-performance, zirconium and silane-based acidic final seal used after iron and zinc phosphates.	+	
<b>Gardolene D 6871</b> High-performance, silane-based, slightly alkaline final seal used after iron and zinc phosphates.	+	
<b>Gardolene 60/1</b> 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.

### Permatreat® 326

Phosphorus-free acid cleaner, automotive approved.

### Polytex

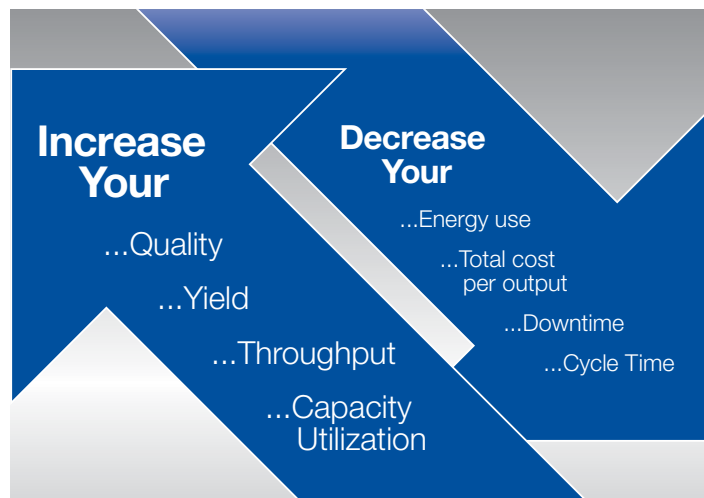
Conventional phosphoric acid-based cleaner.

### Polytex Rinse

Rinse aid to improve water drainage and reduce water spotting.

	Acid	Alkaline
<b>DESCALERS FOR PROCESS EQUIPMENT</b>		
<b>Gardoclean R 1700 F</b> Liquid, alkaline product, for removing scale and other contaminants from steel and stainless steel spray washers, immersion process lines, and heat exchangers.		+
<b>Gardacid® P 4309</b> Liquid, highly concentrated, sulfuric acid product that removes scale from stainless steel spray washers, immersion process lines.	+	
<b>Gardacid P 4460</b> 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.	+	
<b>Gardobond Additive H 7140/1</b> 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

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