

**BROCO PRODUCTS INC.**

# Specialty Chemical

## Catalog

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# BROCO PRODUCTS INC.

**"People and products aligned to change opportunities into successes."**

BROCO PRODUCTS, INC. has been formulating and manufacturing specialty metal finishing chemicals since 1968. While once BROCO was a local distributor, today its products are used all over the world. We market our products through highly specialized regional distributors.

Always known as a service oriented company, our success is tied to an ability to develop customized chemistry and understand its industrial application. R & D performed in our Cleveland, Ohio lab includes both process analysis and pilot assessment. The partnership with customers is supported by a product portfolio of over 350 formulations, and a field service network that understands the uniqueness of each customer's application within the bounds of the finished products cost constraints.

BROCO Specialty Chemicals find application in both job shops and captives for corrosion protection and functional demands. The past 40 years have seen many changes in our industry. BROCO has met those challenges with an unwavering commitment to excellence in customer service and new product development. Regardless, of what industry or application is involved, quality and service are the most important ingredients we have to sell. Our customers receive a lot of both with every item they purchase!

## Vibratory & Barrel Mass Finishing Compounds

LIQUID	POWDER	DEBUR	BURNISH	DESCALE
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### ALKALINE COMPOUNDS

BROCO 30-2		√	Aluminum, Brass, Steel, Precious Metals	Aluminum, Brass, Copper	
BROCO 560-A		√	Aluminum, Brass, Steel, Precious Metals		
BROCO 565-RP		√	Aluminum, Brass, Steel, Precious Metals		
BROCO 5700W		√	Steel, Magnesium	Magnesium	Steel
BROCO 825		√	Copper, Brass, Steel		
BROCO NF-RP		√	Steel		
BROCO OCM-603		√	Steel, Magnesium		Steel, Brass
BROCO OCM-603A		√	Aluminum		
BROCO RUSTSTRIP		√	Steel, Magnesium	Magnesium	Steel
BROCO SCL-SC	√		Lead	Brass, Copper, Lead, Steel, Precious Metals, Lead Alloys	
BROCO SCL-XX	√			Aluminum, Brass, Copper	
BROCO RAC-M	√		Aluminum, Brass, Steel, Precious Metals		
BROCO 85-M	√		Aluminum, Brass, Steel, Precious Metals	Brass, Copper, Lead, Steel, Precious Metals, Lead Alloys	

### ACIDIC COMPOUNDS

BROCO 51 & BROCO 533	√		Stainless Steel	Stone or Ball Burnishing Steel, Stainless Steel	Aluminum, Brass, Copper, Stainless Steel, Steel
BROCO BLEACH BURNISH		√	Steel, Stainless Steel, Aluminum, Brass, Copper		Steel, Stainless Steel, Aluminum, Brass
BROCO ACID SALTS S		√	Steel, Stainless Steel, Aluminum, Brass, Copper		Brass, Copper, Stainless Steel, Steel, Aluminum
BROCO DRY PURGE		√	Brass, Copper, Steel		Aluminum, Brass, Copper, Stainless Steel, Steel
BROCO OCM-604		√	Aluminum, Brass, Copper	Self-tumbling, Brass, Copper Steel	Brass, Copper, Steel
BROCO THE STUFF FOR STAINLESS		√	Aluminum, Brass, Copper, Stainless Steel	Brass, Copper, Stainless Steel, Steel	
BROCO ZB	√		Stainless Steel	Stone or Ball Burnishing Steel, Stainless Steel, Zinc	Aluminum, Brass, Copper, Stainless Steel, Steel

**Some products, left unrinsed will provide corrosion inhibition. Alternatively, a secondary extended duration corrosion preventative can be employed to complement the above process chemistry. Please contact your BROCO PRODUCTS, INC. Representative for recommendations.**

## Corrosion Inhibitors

*Our success is tied to an ability to develop customized chemistry and understand its industrial application.*

<b>BROCO 52</b>	Economical water soluble inhibitor for steel, black oxide or phosphate applications. Produces dry to the touch type coatings.
<b>BROCO 52F</b>	Similar to BROCO 52, but enhanced corrosion resistance and film dryness.
<b>BROCO 690</b>	Solvent emulsion cleaner/ inhibitor.
<b>BROCO BB SPECIAL A</b>	Multi-metal inhibitor developed for copper, brass and precious metals.
<b>BROCO CLEAR COAT</b>	Clear film inhibitor for long term corrosion protection. Often employed over zinc plated surfaces to significantly enhance accelerated corrosion test results.
<b>BROCO FER</b>	Non-petroleum based inhibitor for steel and plated surfaces.
<b>BROCO P23G</b>	Multi-metal inhibitor.
<b>BROCO RAC-M</b>	Formulated with surfactant package for both burr removal and steel inhibition in vibratory/mass finishing applications.
<b>BROCO RINSE AIDS</b>	Series of products to improve rinsing, reduce staining and prevent corrosion.
<b>BROCO RP-26</b>	Multi-purpose steel rust preventative oil that produces a thin moist film coating. Used undiluted.
<b>BROCO RP-65</b>	Multi-purpose steel rust preventative oil that produces a thin dry to the touch film coating. Used undiluted.
<b>BROCO RPA</b>	Multi-metal inhibitor often used as an 'additive' with cleaners and metal working fluids.

## Aluminum Finishing Specialty Chemicals

<b>ETCHANTS</b>	<b>BROCO 5700W</b>	Powdered alkaline etchant with some detergency. Formulated to provide a uniform and consistent etch with minimum scale buildup on tank walls and heating elements. Provides a controlled foam blanket to reduce mist and vapors.
	<b>BROCO 50-L-3</b>	Liquid version of BROCO 5700W to provide ease in handling and control.
	<b>BROCO 51 &amp; BROCO 533</b>	Liquid acid cleaner/etchants developed to provide a less aggressive etch pattern when compared to alkaline processes (and therefore a more uniform finish). Excellent choice where surface cleaning and etching preparation are to be done in a single step. Often used prior to spot welding applications. Solutions are easily rinsed.
	<b>BROCO TSA</b>	Liquid concentrate similar to BROCO 51 & 533, but will also provide desmutting and deoxidizing features for a 'whiter' metal finish.
<b>DEOXIDIZERS</b>	<b>BROCO 893M</b>	Liquid non-chromated desmutting/deoxidizing concentrate. Suitable for a wide range of aluminum alloys. Developed as a safer alternative to concentrated nitric baths.
	<b>BROCO DEOX 4</b>	Powder chromic acid based deoxidizer/desmutter. Developed to address the most difficult surface conditions and provide a uniform, bright aluminum surface. Extremely stable even under conditions of severe metals and soils loading.
<b>CHROMATE CONVERSION COATINGS</b>	<b>BROCO 269</b>	Liquid chromate conversion coating. Produces yellow to deep golden toned finishes on aluminum surfaces for corrosion protection. Prepares aluminum surfaces for subsequent paint/powdercoat application.
	<b>BROCO ACR</b>	Powder version of BROCO 269.
<b>ZINCATE COATINGS</b>	<b>BROCO ZINCATE 16</b>	Liquid alkaline non-cyanide zincate solution for preparation of aluminum surfaces prior to electroless or electrolytic plating processes. Economical ultra-concentrate formulated to be diluted with water.

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# Specialty Chemicals (not otherwise listed)

## BRIGHT DIP SOLUTIONS

<b>BROCO CU-CRS</b>	Chromic based bright dip for copper and copper alloys.
<b>BROCO CUBRITE IV</b>	Peroxide based bright dip for copper and copper alloys.
<b>BROCO 895M</b>	Non-chromated concentrated blend of inorganic acids developed to remove oxides, smut, heat scale, and stains from various metals. Used to clean and brighten stainless steel alloys, Inconel, aluminum, zinc, brass, and copper metals.

## SPECIALTY PRODUCTS

<b>BROCO EP Series</b>	Electropolish concentrates to produce polished stainless steel, aluminum and copper / copper alloy surfaces.
<b>BROCO BV-100</b>	Black oxide salt for steel substrates.
<b>BROCO RINSE AID</b>	Rinse additive for final rinse stages to improve corrosion resistance on steel and provide sheeting action.
<b>BROCO RINSE AID LF</b>	Low foam rinse additive for final rinse stages to improve rinsing efficiency and promote stain-free parts.
<b>BROCO RINSE AID LFR</b>	Low foam rinse additive for final rinse stages to improve corrosion resistance on steel and provide stain-free sheeting action.
<b>BROCO 110</b>	Silicone anti-foam additive suitable for use in a wide variety of industrial applications.
<b>BROCO 111</b>	Non-silicone anti-foam additive suitable for use in a wide variety of industrial applications.
<b>BROCO 1962F</b>	Anti-foam additive for use with alkaline spray cleaners and corrosion inhibitors.
<b>BROCO 291-B</b>	Liquid alkaline paint stripper.
<b>BROCO 300</b>	Non-methylene chloride paint stripper, aluminum compatible.
<b>BROCO STRIP JO</b>	Liquid alkaline engine cleaner and paint stripping solution.
<b>BROCO STUFF FOR STEEL</b>	Acidic detergent for general cleaning/brightening of steel and removal of light rust. Excellent material for hand wiping of surfaces to prepare for subsequent paint or powdercoating. Prepares surfaces prior to welding and removes weld smut.
<b>BROCO STUFF FOR ALUMINUM</b>	Acidic detergent for general cleaning and single step desmutting/deoxidizing of aluminum. Leaves surfaces as bright white metal. Excellent material for hand wiping of surfaces to prepare for subsequent paint or powdercoating. Prepares surfaces prior to welding and removes weld smut. Also suitable for use with non-ferrous metals such as copper and brass.
<b>BROCO STUFF FOR STAINLESS STEEL</b>	Powerful scouring powder used to clean and brighten stainless steel. Removes oxidation as well as heat and weld stains.
<b>BROCO ADD</b>	Liquid additive to improve the performance of alkaline or acidic cleaning materials. Low foaming surfactant package permits soak or spray application. Often permits energy savings by enabling applications to operate at lower temperature settings.
<b>BROCO 539M</b>	Citric acid based passivation solution for stainless steel. Brightens stainless, copper, brass, aluminum, and steel surfaces in a nitric-free solution.
<b>BROCO INHIBIT 50</b>	Additive to inhibit the attack on copper and copper based alloys.
<b>BROCO MP7 (Manganese Phospholene #7)</b>	Rust remover and paint prep acid. Also finds many applications for removing stains from concrete, granite, and various metals.

## MAINTENANCE PRODUCTS

<b>BROCO OCM-2</b>	Economical, general purpose industrial floor cleaner. Suitable for floor scrubbing machines as well as mop & bucket applications.
<b>BROCO FRC50</b>	High performance floor cleaning compound.
<b>BROCO LSC-DB1</b>	Liquid steam cleaner.
<b>BROCO DRY PURGE</b>	Powdered acid used for descaling washer systems.
<b>BROCO MACHINE CLEANER</b>	Liquid machine cleaner for coolant sumps.
<b>BROCO SAFETY SOLVENT</b>	Hi flash solvent for machine and parts cleaning.
<b>BROCO HAND SOAP</b>	Powder hand soap.
<b>BROCO 402-RP</b>	d-Limonene/citric based emulsion degreaser. Used at room temperature. Left unrinsed will provide corrosion protection. Good choice for in plant intermediary cleaning applications and as an alternative to solvents.

## SURFACE ACTIVATION AGENTS

<b>BROCO ACID SALTS Series</b>	Blends of dry acid salts developed as replacements for conventional liquid acids. Suitable for difficult to activate parts such as hardened steels, copper alloys (lead and beryllium bearing). Safe handling and free flowing. Can be used as stand alone materials or in conjunction with conventional acid baths.
<b>BROCO ACID SPIKE Series</b>	Line of additives used in very low volumes to improve acid pickling efficiency, inhibit substrate attack, and provide mist suppression.
<b>BROCO CMS-EPC</b>	Mist suppressant used to reduce surface tension in chrome and electropolishing applications.
<b>BROCO CHROME REDUCER</b>	Additive for alkaline cleaners to reduce chrome contamination effects.

# Phosphates and Conversion Coatings

DETERGENCY	SOAK	SPRAY	For Use On	Comments
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## IRON PHOSPHATES

BROCO 205			√	Ferrous & Non-ferrous	Applicable for low temperature applications. Typically used in five stage process lines.
BROCO 206-M	√	√	√	Ferrous	A versatile product developed for use in either job shop or captive applications where a diverse array of contaminants and may be encountered.
BROCO 206-MII	√	√	√	Ferrous & Non-ferrous	Similar to BROCO 206-M, but formulated with additives to improve surface preparation on aluminum and zinc substrates.
BROCO 207-M	√	√		Ferrous	Excellent cleaner/phosphatizer often employed in three stage lines. Also commonly used at very low concentrations in steam/pressure wand applications.
BROCO 207-MII	√	√		Ferrous & Non-ferrous	Similar to BROCO 207-M, but formulated with additives to improve surface preparation on aluminum and zinc substrates.
BROCO 210 MC	√		√	Ferrous & Non-ferrous	Cleaner/coater formulated to produce high coating weights for increased corrosion protection.
BROCOLD I	√		√	Ferrous	Powder material for ease in handling and safety.
BROCOLD II	√		√	Ferrous & Non-ferrous	Similar to BROCOLD I, but formulated with additives to improve surface preparation on aluminum and zinc substrates.
BROCO ENVIROPHOS Line	√	√	√	Ferrous & Non-ferrous	Environmentally friendly line of molybdate and chlorate-free products.

## ZINC PHOSPHATES

BROCO SZ		√		Ferrous	Produces a fine-grain, light to medium coating weights (500-2000 mg/ft <sup>2</sup> )
BROCO MC		√		Ferrous	Calcium modified to produce microcrystalline coatings. Typically used prior to paint or powdercoating.
BROCO ZNX		√		Ferrous	Heavy zinc phosphate (1000-3500 mg/ft <sup>2</sup> ).
BROCO ZNN		√		Ferrous	Nickel-free heavy zinc phosphate (1000-3000 mg/ft <sup>2</sup> ).
BROCO ZN-FC			√	Ferrous	Spray zinc phosphate process concentrate.

## MANGANESE PHOSPHATE

BROCO MNPHOS-1		√		Ferrous	Produces uniform, crystalline coatings (greater than 1500 mg/ft <sup>2</sup> ) with excellent oil or lubricant retention properties.
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## ZIRCONIUM & VANADIUM CONVERSION COATINGS

BROCO ZR		√	√	Ferrous & Non-ferrous	High performance, environmentally friendly (phosphate-free) Zirconium based conversion coatings. Can be applied as a conventional pre-paint line coating or no rinse final film coating.
BROCO ZRC	√	√	√	Ferrous & Non-ferrous	Similar to BROCO ZR but with detergency to eliminate the need for pre-cleaning stages.
BROCO VPHOS	√	√	√	Ferrous & Non-ferrous	High performance, environmentally friendly Vanadium based conversion coating with detergency. Can be applied as a conventional pre-paint line coating or no rinse final film coating.

## CONVERSION COATING SEALERS / GRAIN REFINERS / BLACKENING AGENTS & ASSOCIATED PRODUCTS

BROCO 780	Non-chromated final seal
BROCO 781	Zinc-free, high performance non-chromated final seal
BROCO SEAL CP	Conventional chromated final seal
BROCO P23G	Non-chromated final seal
BROCO ZN-18	Titanated cleaner used prior to phosphate stage to produce finer grain zinc phosphate deposits
BROCO TA	Titanium activator additive to be used in rinse tanks prior to zinc phosphate for grain refinement
BROCO MN-GR	Manganese activator additive to be used in rinse tanks prior to manganese phosphate for grain refinement
BROCO 944	Additive to produce black surface from hydrochloric acid pickle solutions prior to zinc phosphate
BROCO PN	Phosphate neutralizer used to eliminate unreacted salts and prepare surfaces for dry lube application
BROCO MP-7CS	Acid prep developed to remove heat treat and laser cut scale from steel prior to conversion coating applications
BROCO DRYLUBE	Series of products to be used over zinc or manganese phosphate coatings to provide greatly enhanced lubricity for subsequent metal working operations
BROCOLD BOOSTER	Fluoride based additive used to improve iron phosphate performance when processing aluminum and zinc substrates

# Cleaning Compounds

PRODUCT	FORM	SAFE FOR USE ON										
		SOAK CLEANER	ELECTROCLEANER	SPRAY CLEANER	ULTRASONIC CLEANER	DERUSTER / DESCALER	BUFFING COMPOUND REMOVER	STEEL / STAINLESS STEEL	COPPER / BRASS / CU ALLOYS	ZINC	ALUMINUM	
BROCO 75	Liquid	√		√	√			√	√	√	√	Low alkalinity, non-silicated spray cleaner developed for use on ferrous and non-ferrous substrates.
BROCO 80	Liquid	√		√				√	√			Moderately alkaline all purpose product. Often used in phosphate line applications.
BROCO 87	Liquid	√		√	√		√	√	√	√	√	Encompasses a line of non-silicated products that vary by spray/low foam or immersion, non-chelated, and coupled wetting agents.
BROCO 120-M	Powder	√						√	√			Heavy duty, highly wetted, dispersant-type cleaner. Exceptionally free rinsing.
BROCO 161-K	Powder			√			√	√	√		√	Low alkalinity spray cleaner suitable for aluminum applications. Also finds use as a secondary buffing compound remover in electroplating lines.
BROCO 533	Liquid	√				√		√	√		√	Acidic cleaner used to remove light rust, soils, smuts and heat treat scale. May be used to prepare multi-metal surfaces prior to applying organic coatings.
BROCO 536 & BROCO 537	Powder	√		√			√	√	√	√	√	Heavy-duty grease and oil removers. d-Limonene based surfactant system provides extensive emulsification and soil dispersion characteristics even with heavy contamination loading.
BROCO 539M	Liquid	√			√	√		√	√		√	Citric based acid product used in brightening, cleaning, activating and passivating applications.
BROCO 690	Liquid	√		√				√	√	√	√	Solvent emulsion product to clean and rust inhibit in single stage washers. Safe in multi-metal applications. Often used in facilities as an intermediate cleaner/inhibitor.
BROCO 800A	Liquid	√		√				√	√			Heavy-duty liquid often used in job shops as a prep for metal finishing processes. Surfactant formulation originally developed to address paraffin stamping fluid residue.
BROCO 811	Powder		√			√		√		√		Heavy-duty reverse current electrocleaner for steel. Removes light rust and imbedded smuts which other cleaners have difficulty addressing.
BROCO 812	Powder		√			√		√		√		Similar to BROCO 811 but formulated to split oils from solution.
BROCO 825	Powder	√	√					√	√			Heavy-duty multi-metal cleaner for steel as well as copper, brass, & bronze prior to electroplating.
BROCO 900	Powder	√	√					√	√			Alkaline soak and/or electrocleaner for steel and copper alloys. Free rinsing, high conductivity and extended solution life. Suitable for hard water applications.
BROCO 4045M	Powder			√				√				High alkalinity material often employed in heat treating facilities.
BROCO HD	Powder	√						√	√			Highly alkaline soap cleaner designed to split oils from solution. Good choice in job shop barrel or rack electroplating applications.
BROCO HDSS	Powder	√						√	√			Similar to BROCO HD but will retain oils in solution.
BROCO K2-WL	Powder	√	√					√	√			Premium product with dispersant package making it suitable for a variety of the toughest and most tenacious smuts in industrial applications.
BROCO LE-84	Liquid		√					√	√			Liquid electrocleaner suitable for barrel or rack applications.
BROCO LS-APX-NC	Liquid	√						√	√			Non-chelated product often used for cleaning stamping fluids from parts.
BROCO LS-AP & BROCO LE-AP	Liquid	√	√					√	√			Surfactant concentrates used with over-the-side additions of caustic soda. Formulated as an economical solutions in high production electroplating applications.
BROCO MP	Powder	√	√					√	√	√	√	Multi-purpose soak and/or electrocleaner. Highly buffered product suitable for zinc based die castings as well as other metals.
BROCO OC-HDD	Powder	√	√			√		√				Premium soak product suitable for a variety of the toughest industrial applications.
BROCO OCM-2	Liquid	√			√			√	√	√	√	General purpose maintenance cleaner. Economical enough to be used with floor scrubbing equipment.
BROCO OCM-90	Powder	√	√					√	√			Heavy-duty, non-chelated alkaline soak and/or electrocleaner for steel and copper alloys. Features include free rinsing, high conductivity and extended solution life.
BROCO OFF-100	Powder	√			√	√		√	√	√	√	Multi-metal buffing/polishing compound remover. Often used with ultrasonics.
BROCO RUSTSTRIP	Powder	√				√		√				Highly alkaline, chelated material for use in removing oxide layers, heavy soils and paints.
BROCO SCL-XX	Liquid	√			√	√		√	√	√	√	Multi-metal buffing/polishing compound remover. Often used with ultrasonics.
BROCO V-200	Liquid	√		√				√	√		√	Versatile high performance silicated soak or spray cleaner for ferrous and non-ferrous alloys. Excellent performance even under high soil loading conditions.
BROCO V-326	Powder	√				√		√	√	√	√	Low alkalinity non-silicated cleaner suitable for aluminum applications. Also finds use as a secondary buffing compound remover in electroplating lines.