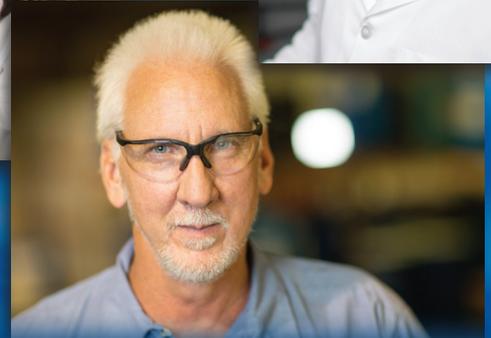
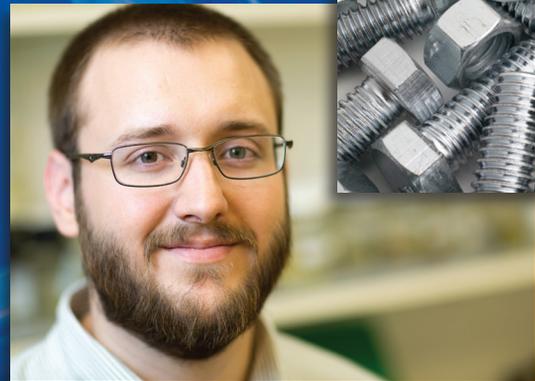
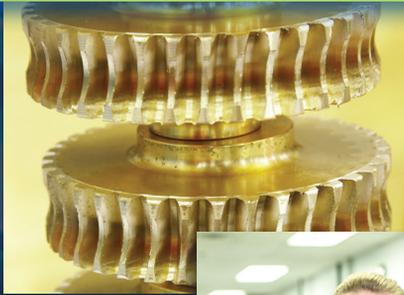


# WHAT IS SCIENCE WITHOUT CARE?



INDUSTRIAL CLEANING  
TECHNOLOGY



**YOUR**  
cleaning problem is  
**OUR**  
cleaning problem.

We don't quit until we've delivered the perfect cleaning solution for your specific needs and situation. For more than 20 years, our clients have benefited from the care that goes into all our cleaning solutions. When science and care converge, that makes all the difference.



## Cleaning is more than just getting the science right.

**WE CARE.** And that starts with getting the science right. But, it goes way beyond that. At KYZEN it means putting you, the customer first, no matter what. It means taking the time to really get to know you and understand your specific needs well enough to provide the most effective, environmentally-friendly cleaning technologies and solutions for your specific situation.

KYZEN has been pioneering the world's award-winning environmentally responsible cleaning technologies since 1990 by fusing our commitment to groundbreaking science and research with the care we

have for your manufacturing process and your success.

The word KYZEN itself is derived from the Japanese word for continuously improving. That persistent and determined drive to advance and better our cleaning technologies and service is manifested in the unique solutions developed to suit you.

You can rest assured that when a KYZEN scientist tackles a customer's problem, taking the time and care to look at it in new ways from every angle, the right solution results. We guarantee it.

**"It's not enough to know that a customer needs a solution. We want to understand why they need it and how it can help them succeed in their business."**



## We understand your performance is directly related to ours.

What sets KYZEN apart among cleaning technology companies? Beyond the fact that we are continuously honored for our innovation and service, it's the way we approach your problems as though they were our own. Others may know that a customer needs a low surface tension solution. We know why you need it, how it needs to work within your distinct parameters, limitations and challenges, where the process problems are occurring, how the solution needs to be modified and your comfort level with installing it. This kind of in-depth knowledge of your processes, company, technical and

manufacturing needs is attained when science and care converge.

Care also means responding quickly, showing up anytime, anywhere in the world there is a problem and tackling it head on until it is successfully resolved. It's what compels us to want you to achieve the highest levels of performance. And it's what motivates our world-renowned scientists and engineers to pursue and achieve the revolutionary research and innovation you need today and 20 years from now.

**ENVIRONMENTAL RESPONSIBILITY** Our teams of scientific and engineering experts go beyond being compliant with current environmental regulations. We anticipate and stay ahead of regulatory mandates, exceeding even the most stringent standards.



**SCIENCE** doesn't know  
your job depends on solving  
a cleaning problem. But,  
**CARE DOES.**

At KYZEN we empower our people to go the extra mile in understanding and meeting a customer's specific cleaning challenges and needs. Their dedication goes well beyond just doing their job. It can be found in their actions and attention to detail each day.





## GLOBAL RECOGNITION

KYZEN as a company, our world-renowned scientists and our products have all been honored with more than 40 prestigious industry awards over the years in a number of different categories:

**NEW PRODUCT INNOVATION**

**GLOBAL TECHNOLOGY**

**CUSTOMER SERVICE**

**ENVIRONMENTAL**

**BEST COST OF OWNERSHIP**

**GLOBAL REACH** With manufacturing, applications, research and engineering centers based across the globe, KYZEN's expert engineers, scientists and technicians are readily accessible around the clock to customers all over the world.



## Metal Finishing

We understand that the high performance demands of metal finishing are a broad and diverse set of needs. Whether yours are routine parts cleaning, corrosion protection, demanding Mil-Spec requirements, high reliability, automotive parts, the precision cleaning required by space systems, or anywhere in between, we know you demand reliability and performance from every part every time.

Unless a surface is free of lubricants, oils and other imperfections it's not clean enough, smooth enough or ready for finishing. Soils change in metal finishing, and our experienced team of KYZEN engineers adapts and innovates to meet new and growing

demands and challenges whether from oils and coolants, metals, smut, oxides, additives or abrasive compounds.

Where science and care converge you'll find a commitment to continuous improvement, and to research and development that consistently results in some of the cleaning technology industry's most innovative products and solutions. Our high performance cleaning products and processes already help keep the metal finishing, aerospace, automotive, manufacturing, medical devices and other industries running smoothly. We can deliver, or create the right solution that can help you do the same.

**"We have the resources, talent and technologies to support our customers wherever they are – on the line, in the field and in the engineering side of things."**



# INDUSTRIAL CLEANING PRODUCTS

CLEANERS	SOIL TYPE				MATERIAL			PROCESS				
	OILS / COOLANTS (POLAR)	OILS (NON-POLAR)	CARBON / SMUT / OXIDES	LAPPING BUFFING COMPOUNDS	STEEL / MAGNESIUM TITANIUM	ALUMINUM / ZINC / DIE CAST	BRASS / COPPER / BRONZE	SPRAY SYSTEMS	ULTRASONIC CLEANING	IMMERSION WITH AGITATION	VACUUM VAPOR DEGREASING	CORROSION PROTECTION INCLUDED
METALNOX M6093			•		•	•	•	•	•	•		
METALNOX M6310	•	•		•		•	•	•	•	•		•
METALNOX M6314	•	•				•	•	•	•	•		
METALNOX M6319	•	•			•		•	•	•			
METALNOX M6319CP	•	•			•		•	•	•			•
METALNOX M6319US	•	•			•		•	•	•			
METALNOX M6321	•	•	•		•		•	•				
METALNOX M6324CP	•	•	•	•	•		•	•	•			•
METALNOX M6324R	•	•	•	•	•		•	•	•			
METALNOX M6324US	•	•	•	•	•		•	•	•			
METALNOX M6330	•	•		•	•		•	•	•			
METALNOX M6380	•	•			•	•	•				•	
METALNOX M6381		•			•	•	•				•	

## SPECIAL PURPOSE PRODUCTS

### KYZEN DF-7

Sump-Side Anti-Foaming Agent for Industrial Aqueous Cleaners - a blend of ingredients specially chosen to be effective at reducing foam caused by in aqueous cleaning systems at all temperatures.

### KYZEN BOOSTER 6

Maintenance Booster for METALNOX M6960 - a specialty blended stabilizer designed to be added sump-side to extend the life of bromine containing vapor degreasing systems.

### KYZEN BOOSTER 80

Maintenance Booster for METALNOX® M6380 - an additive designed to stop the formation of and neutralize acidic materials that may form in degreasing systems while removing chlorine containing oils. KYZEN'S Acid Acceptance Kit 2 monitors acid levels and indicates when KYZEN® Booster 80 is needed

### KYZEN BOOSTER 81

Maintenance Booster for METALNOX® M6381 - an additive designed to stop the formation of and neutralize acidic materials that may form in degreasing systems while removing chlorine containing oils. KYZEN'S Acid Acceptance Kit 3 monitors acid levels and indicates when KYZEN® Booster 81 is needed.

SPECIALTY APPLICATIONS	SOIL TYPE			MATERIAL			PROCESS / TREATMENT					
	OILS / COOLANTS	CARBON / SMUT OXIDES	ABRASIVE COMPOUNDS	STEEL / MAGNESIUM TITANIUM	ALUMINIUM / ZINC DIE CAST	BRASS / COPPER / BRONZE	PASSIVATION	ELECTROCHEMICAL	PHOSPHATING	AEROSPACE / MIL-SPEC	RUST / SCALE REMOVAL	TRADITIONAL VAPOR DEGREASING
METALNOX M6060	•			•					•			
METALNOX M6091		•		•							•	
METALNOX M6093		•		•	•		•				•	
METALNOX M6318	•			•	•	•				•		

CORROSION INHIBITORS	MATERIAL			PROTECTION TYPE		
	STEEL	ALUMINIUM	BRASS / COPPER	AQUEOUS - DRY FILM	OIL - WET FILM	WATER DISPLACING OIL
KYZEN CP80	•	•	•		•	
KYZEN CP81	•	•	•		•	
KYZEN CP90D	•	•				•
KYZEN CP90S	•			•		
KYZEN CP90SA	•			•		
METALNOX M6310		•	•	•		



# INDUSTRIAL CLEANING PRODUCTS

## CLEANERS

### METALNOX M6093

*Safe Citric Acid Cleaner/ Oxide Remover/ SS Passivator*

METALNOX® M6093 is a citric acid formulation designed to be effective on metal oxides, scale, rust, carbonaceous soils and other industrial soils. It can be used on a variety of metals including steel and aluminum.

### METALNOX M6319

*Aqueous Alkaline Industrial Parts Cleaner*

METALNOX® M6319 is a heavy-duty, low foaming mild alkaline chemistry designed to clean a wide range of machining oils and greases from metal parts for steel, ferrous, copper and many alloys.

### METALNOX M6321

*High Alkaline Cleaner for Carbonaceous Soils*

METALNOX® M6321 is an aqueous blend specially designed for heavy-duty cleaning of carbonaceous soils resulting from deep draw, laser cutting, welding, brazing and other similar operations.

### METALNOX M6324US

*Heavy-Duty Alkaline Immersion and Ultrasonic Cleaner*

METALNOX® M6324US is a high strength, high alkaline, aqueous cleaning chemistry which contains chemical components designed for ultrasonic and other immersion cleaning systems.

### METALNOX M6380\*

*Modified Alcohol Solvent for Polar and Non-Polar Soils*

METALNOX® M6380 is a modified alcohol based solvent cleaner blend designed to clean a wide range of polar and non-polar soils from ferrous and non-ferrous surfaces.

### METALNOX M6432

*Neutral pH All Metal Cleaner*

METALNOX® M6432 is a neutral pH cleaning chemistry designed to be effective on a variety of industrial sols including oil, grease, light oxides and buffing compound.

### METALNOX M6314

*Mild Alkaline All-Metal Cleaner*

METALNOX® M6314 is a safe, all-purpose aqueous cleaner, specifically designed to clean a broad range of both water soluble and insoluble oils. It is a very low solids product and is often used without a rinse, even prior to coating.

### METALNOX M6319US

*Alkaline All-Purpose Ultrasonic Cleaner*

METALNOX® M6319US is an alkaline cleaner designed to be used in ultrasonic parts cleaning systems. While effective on removal of most types of oils and greases, it is also an excellent chemistry for buffing, lapping and polishing compounds.

### METALNOX M6324R

*Heavy-Duty Aqueous Alkaline Cleaner*

METALNOX® M6324R is a high alkaline, aqueous cleaner specially designed for heavy-duty cleaning of oils, greases, oxides and carbon. M6324R is effective in high speed stamping and deep draw applications.

### METALNOX M6330

*Heavy Duty Aqueous Alkaline Cleaner and Brightener*

METALNOX® M6330 is a high alkaline aqueous solution designed to clean and brighten a wide variety of metal parts.

### METALNOX M6381\*\*

*Precision Hydrocarbon Solvent Cleaner*

METALNOX® M6381 is an aliphatic hydrocarbon blend specially designed for heavy-duty cleaning of oils, waxes, grease and shop dirt while being safe on ferrous, copper alloys, magnesium, aluminum, plastics rubbers, glass and ceramics.

### METALNOX M6440

*Neutral pH Ultrasonic Immersion Cleaner for Buffing / Lapping Compounds*

METALNOX® M6440 is a safe, neutral pH cleaning chemistry designed for removal of buffing compounds and metal oxides. M6440 is safe for all of the metals commonly found in the medical implant and device industries.

\*Support Products for Metalnox M6380: Kyzen CP80, Kyzen Booster 80 & Kyzen Acid Acceptance Kit 2 (AAK2)

\*\*Support Products for Metalnox M6381: Kyzen CP81, Kyzen Booster 81 & Kyzen Acid Acceptance Kit 3 (AAK3)



## CLEANERS WITH CORROSION INHIBITION

### METALNOX M6319CP

*Aqueous Alkaline Industrial Parts Cleaner with Rust Protection*

METALNOX® M6319CP is a heavy-duty, low foam alkaline chemistry designed to remove a wide range of machining and stamping oils from metal parts, including steel and copper alloys. M6319CP combines both exceptional cleaning and corrosion protection for steel parts. It is used in both the wash and rinse stages of multi-stage cleaning systems.

### METALNOX M6310

*Mild Alkaline Cleaner with Aluminum/Brass Protection*

METALNOX® M6310 is a mild alkaline, aqueous cleaning chemistry designed to remove machining oils, burned on carbon and other manufacturing soils from all types of metal substrates. M6310 is highly effective on tungsten carbide and other metals susceptible to chemical attack.

## CORROSION INHIBITORS

### KYZEN CP90S

*Aqueous Long-Term Dry Film Corrosion Preventative*

KYZEN CP90S is an aqueous blend of organic and inorganic inhibitors specially designed for long-term protection from oxidation during in-door storage. To prevent flash rusting of ferrous parts, add 1-3% CP90S to all wet stages.

### KYZEN CP90SA

*Long-Term Dry Film Corrosion Preventative*

KYZEN CP90SA is a long term corrosion protection product proven effective in preventing rust or oxidation on all ferrous parts in the most humid environment, even during ocean freight shipment. CP90SA also ships safely via airfreight.

### KYZEN CP90D

*Water Displacing Long-Term Wet Film Corrosion Preventative*

KYZEN® CP90D is a heavy-duty blend of organic inhibitors in a water displacing hydrophobic medium. It is specifically designed for long term protection from oxidation during in-door storage.

### KYZEN CP80

*Corrosion Preventative Additive for Modified Alcohol Solvents*

KYZEN® CP80 is a heavy duty blend of organic inhibitors specifically designed to be used with Metalnox M6380 or other modified alcohol solvents. CP80 leaves a wet film and offers short and long term protection on a variety of metal parts for indoor storage.

### KYZEN CP81

*Corrosion Preventative Additive for Hydrocarbon Solvent*

KYZEN® CP81 is a heavy duty wet film corrosion preventative. CP81 is a blend of organic inhibitors explicitly designed to be used with Metalnox M6381 or other hydrocarbon solvents. CP81 offers short term and long term protection on a variety of metal parts for indoor storage.

### METALNOX M6324CP

*Heavy Duty Alkaline Industrial Parts Cleaner with Rust Protection*

METALNOX® M6324CP is a heavy-duty, alkaline cleaner/inhibitor formulated to remove chlorinated, paraffinic oils used in a wide range of machining, stamping, and deep draw operations. M6324CP is built with effective steel corrosion inhibitors to provide long term protection from rust. M6324CP can also be added to both the wash and rinse stages of multi-stage cleaning systems.



## SPECIALTY APPLICATIONS

### METALNOX M6060

*Iron Phosphatizing Solution and Cleaner*

METALNOX® M6060 is an effective, pre-coating treatment chemistry for both aluminum and steel. It is used prior to coating operations for cleaning and phosphatizing, or strictly phosphatizing.

### METALNOX M6318

*Mil-Specification Compliant Alkaline Precision Cleaner*

METALNOX® M6318 is designed to clean aluminum, titanium and other materials commonly used in the military and aerospace industries. M6318 was tested and conforms to many AMS and ASTM specifications including ASTM F-1110 (Sandwich Corrosion).

### METALNOX M6091

*Strong Mineral Acid Rust / Scale Remover and Tank Neutralizer*

METALNOX® M6091 is a strong aqueous acid blend with a pH of 1. M6091 has a specially selected blend of organic and mineral acids, inhibitors and surfactants designed to be effective on metal oxides, scale, lime deposits, particulates, and other inorganic soils.



*Because we want you to achieve the highest levels of performance, we connect care with leading science to continuously improve, problem solve and create the most effective cleaning solutions to suit your specific needs.*

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WORLDWIDE ENVIRONMENTALLY RESPONSIBLE CLEANING TECHNOLOGIES