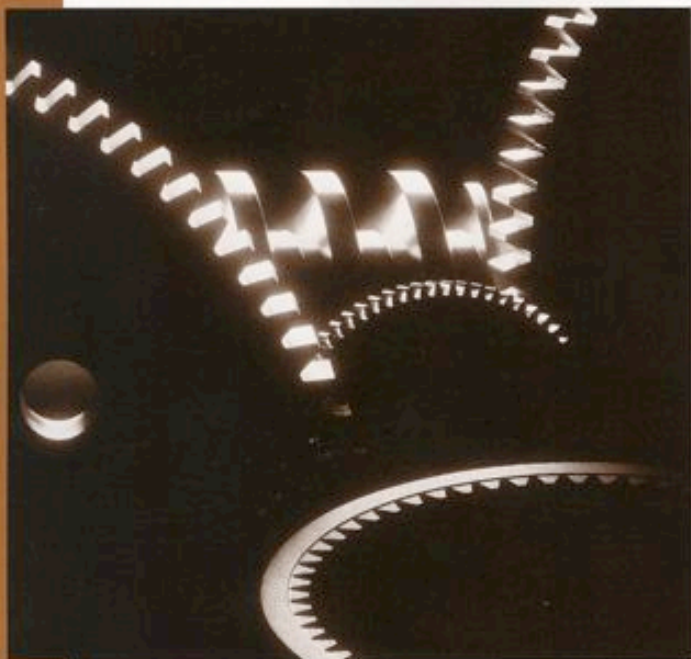


# METALNOX

*Precision Cleaning Solutions*



# KYZEN



## Name your contaminant...

Machine oils, cutting oils, grease, wax, adhesives, grease pencil, Magic Marker ... No soil or contaminant is out of the ordinary for Kyzen.

## Name your cleaning application, your cleaning process...

In whatever high technology industry — aerospace, automotive, precision metal fabrication and finishing. Whatever your cleaning application — ferrous alloys, copper,

*Kyzen's innovative Metalnox, Ionox, Aquanox, and Lonox product lines provide solutions for electronics cleaning, metal and precision parts cleaning, and other specialized cleaning applications in a wide range of high technology industries.*

*At Kyzen, we think precision cleaning is about process. Cleaning chemistries, cleaning machines, and water treatment, all coming together in an integrated solution.*

*And we think it's about people. Expert technical support working with you to formulate the best possible solution for your cleaning job.*

*Our reputation and success are based on selling solutions, not chemicals.*

*Kyzen Corporation. A solution-driven, process company.*

brass, aluminum, plastics, glass. Whatever your cleaning process — batch machine, spray-in-immersion, dipping, ultrasonic bath, hand-wipe ... You'll find your solution in the Kyzen Metalnox family of precision cleaning products.

From a broad product line of highly effective, bio-generated, environmentally safe solvents — using no CFC's and with lowVOC's (volatile organic compounds) — Kyzen will help you select and test the Metalnox solution that's right for your job.

The Metalnox product array is backed by Kyzen's extensive Cleaning Applications & Evaluation Center — with complete in-line, batch machine, and other testing capabilities to match your

cleaning approach — so you can evaluate our product in your process and machinery in our facility before you implement.

The Metalnox product line and Kyzen demonstration facilities are augmented and strengthened by our capability to custom-formulate to your specific needs.

Our expert technical support staff will validate and implement a solution for your cleaning problem. And they'll help you accelerate the implementation cycle by testing and getting things right in our Applications Center, before reaching your facility and machinery.



## **CLEANING SOLUTIONS**

### *VOC compliant aqueous solvents*

#### **Metalnox XZN**

A high strength, aqueous-based cleaner/degreaser for removing heavy duty oils from carbon steel precision parts. A non-emulsifying solution designed to split oils out of solution.

#### **Metalnox PC5**

A low-foaming, aqueous-based cleaner for removing a broad range of contaminants from both ferrous and non-ferrous metals (brass, copper, aluminum). A non-emulsifying solution, water-dilutable for immersion & spray applications.

#### **Metalnox M6302**

A low-foaming, aqueous-based cleaner effective in removing oils, waxes, grease, and other industrial contaminants from non-ferrous and ferrous metals without causing discoloration or oxidation to the surface being cleaned. Oil contaminants separate easily from solution. Excellent for use in spray applications.

#### **Metalnox M6303**

An aqueous-based non-ferrous metal cleaner specially formulated for use in batch, non-spray process applications. Effective in removing oils, cutting fluids, greases, and other industrial contaminants. Rapid cleaning action & rinsability accelerates processing time.

#### **Metalnox M6040**

A non-silicated, aqueous solution effective in removing stamping, grinding & cutting fluids, buffing compounds, and other shop soils. Cleans without staining or discoloring the surface and rinses easily, leaving a residue-free surface. It will not cause the formation of silicate glass in heat-treating operations.

### *non-aqueous solvents*

#### **Metalnox X381**

A powerful and versatile cleaner for removing petroleum-based oils, greases, & particles from substrates such as non-ferrous metals, plastic, & glass. A fast drying solution with quick solvent release, excellent for hand-wipe applications.

*non-aqueous solvents (continued)*

**Metalnox X383**

A powerful cleaner for removing greases, oils, and particles from substrates such as non-ferrous metals, plastic, & glass. A slow-drying solution that does not rinse readily with water.

*water emulsified solvents*

**Metalnox M6200**

A versatile, semi-aqueous cleaner effective in removing natural oils, drawing oils, adhesives, wax, paints, & coatings. Designed to be used at full concentration in wash tanks. Rinses easily with hot, de-ionized water.

**Metalnox PC3/LF**

A versatile maintenance product for hand-wipe or dip applications. Excellent for cleaning hardened resins from re-flow & wave soldering machines & filters.

**RUST & CORROSION INHIBITORS**

**Metalnox XC17**

An aqueous-based, wet film corrosion inhibitor, used at low concentrations (.05 - 5%) in the final rinse phase of the cleaning process. Leaves a protective film that inhibits oxidation deposits on ferrous metals for an extended period.

**Metalnox XRP3**

An aqueous-based rust preventative, for use at low concentrations (.05 - 5%) in the final rinse phase of the cleaning process. Leaves a dry, protective film on ferrous metal parts. Compatible with vacuum heat treat operations.

**Metalnox RP4**

A water-displacing rust preventative, primarily for ferrous metals, but also for non-ferrous metals as well. For operating conditions where a higher flash point is required.



## CLEANING AGENTS

metal cleaning application	contaminants removed	operating concentration	operating temp range	flash point
<b>VOC compliant aqueous solvents</b>				
<b>Metalnox XZN</b> carbon steel & ferrous precision parts	cutting & drawing oils; greases	2 - 15 %	120 - 160°F	NA
<b>Metalnox PC5</b> ferrous & non-ferrous alloys	multi-purpose cleaner/degreaser	2 - 15 %	120 - 160°F	none to boiling
<b>Metalnox M6302</b> aluminum, copper, glass, spray-in-air	versatile cleaner/degreaser	8 - 10%	120 - 160°F	none to boiling
<b>Metalnox M6303</b> aluminum, copper, glass, batch soak	versatile cleaner/degreaser	8 - 10%	120 - 160°F	none to boiling
<b>Metalnox M6040</b> ferrous & non-ferrous	cutting & machining oils	2 - 10%	140 - 180°F	none to boiling
<b>non-aqueous solvents</b>				
<b>Metalnox X381</b> hand-wipe metal cleaner	versatile cleaner for oils, wax, grease	full	70°F	100°F (CC)
<b>Metalnox X383</b> batch or hand-wipe metal cleaner	versatile cleaner for oils, wax, grease	full	70°F	221°F (CC)
<b>water emulsified solvents</b>				
<b>Metalnox M6200</b> metal cleaner for ferrous & non-ferrous alloys	film coating, oils, greases & adhesives remover	full	100 - 160°F	425°F (CC)
<b>Metalnox PC3/LF</b> maintenance product	hardened resins	5 - 10 %	120 - 160°F	none to boiling
<b>RUST &amp; CORROSION INHIBITORS</b>				
metal cleaning application	contaminants removed	operating concentration	operating temp range	flash point
<b>Metalnox XC17</b> aqueous wet film rust preventive	n/a	0.5 - 5% in rinse	70 - 160°F	none to boiling
<b>Metalnox XRP3</b> aqueous dry film rust preventive	n/a	0.5 - 5% in rinse	70 - 160°F	>200°F (CC)
<b>Metalnox RP4</b> water-displacing rust preventive, high flash point	n/a	full	70°F	215°F (CC) 223°F (OC)

Note: CC = Closed Cup, OC = Open Cup