



# METALNOX®- SURFACE FINISHING

## PRODUCTS & APPLICATIONS GUIDE



Acid / Caustic Heavy Duty Cleaners		Application	Substrates	Contaminants Removed	Typical Application	Operating Conc.	Temp.	pH Range @ 10%
M6091	Mineral acid, low foaming, heavy duty, aqueous cleaner	Spray or Immersion	Concrete, aluminum, copper, steel, composites, ceramics, and plastics	Light rust, scale and other oxides	System descaling, aluminum oxide removal, musical instrument repair	3 -10%	140 -160°F	1 typical
M6093	Multi-metal safe, heavy duty, low foaming cleaner	Spray or Immersion	Metals, plastic, rubbers, concrete, and glass	Light rust, hard water scale, metal oxides, light carbon, lime deposits	Removal of metal oxides and scale from parts or equipment	5 -12%	140 -160°F	3
M6060	An effective acid liquid cleaner and iron phosphatizing solution containing a blend of mineral acids,	Spray or Immersion	Steel Aluminum	Light Oils, light metal oxides light carbon leaner residues	A single-stage process or combined with pre-cleaners. Phosphating	2-5%	ambient-180°F	2-4
M6324R	Heavy duty aqueous chelated caustic cleaner/degreaser	Spray or Immersion	Ferrous, copper, nickel, steel, stainless, cast iron, composites, magnesium, titanium	Carbonacious soil, smut, rust, heavy grease, oil, scale, dry lube, mold release	Developed for high speed stamping operations and industrial rebuild	5 -10%	140 -160°F	12.5
M6324US	Heavy duty chelated caustic immersion cleaner	Ultrasonics Immersion	Ferrous, copper, nickel, steel, stainless, cast iron, magnesium, and titanium	Carbonacious soils, remanufacturing, light rust, grease, oil, scale	Developed for ultrasonics and other immersion processes where moderate foam is tolerated	8 -12%	140 -160°F	12.5
M6320	Heavy duty aqueous Alkaline cleaner/degreaser	Spray or Immersion	Ferrous, copper, nickel, steel, stainless, cast iron, composites, magnesium, and titanium	Buffing/lapping oil, heavy grease, scale, dry lube, mold release	In-line and batch spray systems, ultrasonics	5 -10%	140 -160°F	12.5-13.5

Neutral PH Cleaners	Application	Substrates	Contaminants Removed	Typical Application	Operating Conc.	Temp.	pH Range @ 10%	
M6432	Neutral all-temperature low foaming all purpose cleaner	Spray, Immersion or Manual	Aluminum, copper, brass, bronze, zinc, steel, glass, ceramic, stainless steel, cast iron, nickel, & magnesium	Mineral oils, silicone oils, hydrocarbon oils, cutting & stamping oils, greases, fingerprints, polymer dust, wax and lipstick	Screw Machine, Pre- paint/ powdercoat, stamping, machining, sink on a drum	3 -10%	80 -180°F	7- 8.5
M6441	Neutral, non-silicated aqueous cleaner and brightener effective on a broad range of buffing compounds	Spray, Immersion or Manual	Aluminum, copper, brass, bronze, zinc, steel, stainless steel, cast iron, nickel, magnesium	Buffing, lapping/polishing compounds, heavy grease and oils, finger prints, wax, and lipstick	General cleaning, OEM, maintenance, remanufacturing, sink on a drum	3 -10%	130 -160°F	7 - 8.5
M6440	Neutral, non-silicate aqueous cleaner and brightener effective on a broad range of buffing compounds	Immersion / Ultrasonics	Aluminum, copper, brass, bronze, zinc, steel, stainless steel, cast iron, nickel, magnesium	Dry lube, buffing/ lapping/ polishing compounds, grease, oils, finger prints, wax and lipstick	General cleaning, OEM, maintenance, remanufacturing, sink on a drum	5 -15%	80 -170°F	7 - 8.5

Military/Aerospace Specification Compliant								
M6411	Neutral aqueous cleaner, no chealators, sprayable @ 140 +, meets Mil-spec for Hydrogen Embrittlement, Type 1a	Spray	Aluminum, copper, brass, bronze, zinc, steel, stainless steel, cast iron, nickel, & magnesium	Grease, oils, stamping fluids, buffing and lapping compounds, lipstick, finger prints, dye penetrant	Aerospace interior, skins, engines, landing gear, hydraulics, MRO	3 -10%	140 -180°F	6.5 - 7.5
M6318	Aqueous alkaline cleaner containing builders, organic and inorganic inhibitors and surfactants in a water base Very low foaming	High pressure spray, immersion or Manual	Aluminum, copper, brass, steel, stainless steel, cast iron, nickel, & magnesium	Grease, oils, stamping fluids, buffing and lapping compounds, lipstick, dye penetrant, finger prints	Aerospace interior, skins, engines, landing gear, hydraulics, MRO	3 -10%	140 -180°F	10.8 - 12.2

Mild Alkaline Cleaners		Application	Substrates	Contaminants Removed	Typical Application	Operating Conc.	Temp.	pH Range @ 10%
M6310	Aqueous blend of silicate, phosphate, surfactants, chelators, and inhibitors	Ultrasonics Immersion Spray-in-air	Aluminum, copper, zinc, magnesium, stainless, carbon steel, titanium	Grease, oils, wax, carbon, oxides, light scale	Low temp. spray, remanufacturing, screw machines, maintenance	5 -12%	140 - 160°F	11.3 - 13.1
M6314	Blend of alkalinity builders, chelators, conditioners, surfactants, organic and inorganic inhibitors and a trace amount of silicates in a water base	Spray, Immersion or Manual	Aluminum, copper, brass, steel, stainless steel, cast iron, nickel, magnesium and titanium	Grease, stamping fluids, buffing, polishing and lapping compounds, wax, mold release, oils, shop dirt	Low temperature spray, remanufacturing, screw machines, maintenance	3 -10%	120 - 150°F	11.0 - 12.0
M6319	Aqueous cleaner containing conditioners, chelators, organic and inorganic inhibitors, surfactant and trace levels of free caustic alkali, and silicate in a water base	Spray or Immersion	Steel, stainless steel, cast iron, nickel, copper, brass, magnesium, titanium and some aluminums	Grease, oils, stamping fluids, buffing and lapping compounds, lipstick, mold release	OEM, remanufacturing, single stage processes, screw machines, maintenance	3 -10%	120 - 150°F	11- 13.4
M6319US	Aqueous cleaner containing conditioners, chelators, surfactants, trace silicate, and free caustic	Ultrasonics Immersion	Copper, brass, zinc, cast iron, titanium, stainless, some aluminum	Grease, oils, buffing compound, mold release, light scale, and rust	OEM, remanufacturing, screw machines, maintenance	6 -10%	120 - 150°F	12.1 - 13.1

Vapor Degreasing Solvents								
M6960	Brominated vapor degreasing solvent	Vapor Degreaser	Aluminum, copper, brass, bronze, zinc, steel, glass, ceramic, stainless steel, cast iron, nickel, & magnesium	Grease, stamping fluids, buffing, polishing and lapping compounds, wax, mold release, oils, shop dirt	Vapor degreaser with best available control technology (ref. Kyzen Operational Bulletin)	100%	158°F	NA
M6380	Precision cleaning chemical solvent for polar and non-polar soils	Immersion, manual and vacuum systems	a wide range of polar and non-polar soils from ferrous and non-ferrous surfaces	Most materials of construction used in industrial parts cleaning systems and processes	Effective in immersion, manual and vacuum applications	100%	Ambient	10.0

Specialty Organic Solvent	Application	Substrates	Contaminants Removed	Typical Application	Operating Conc.	Temp.	pH Range @ 10%	
M6381	High flash aliphatic solvent cleaner. Water immiscible	Immersion or Manual	Aluminum, copper, brass, bronze, zinc, steel, ceramic, stainless steel, cast iron, nickel, & magnesium	Grease, oils, stamping fluids, tar and pitch, monomer dust, and pyrotechnic compounds	TCA, MEK replacement. Aerospace, pressure vessels and ordnance	100%	Ambient	NA
C8544	Effective Full-Strength Maintenance Cleaner/Stripper. Paint and powder coating stripper	Immersion or Manual	Automotive, electronics and optics components	Organic Coatings, Carbon, Grease, Oils Pigments, Finger Prints	Use on yellow metals, aluminum, ferrous and composites in addition to most precious metal	100%	130 -180°F	2.0-4.0
<b>Corrosion Inhibitors</b>								
CP90D	90 day long-term wet film corrosion inhibitor. Water displacing Use at 100%.	Immersion or Manual	Ferrous & non-ferrous	Displaces water	Use as a final rinse	100%	Ambient	6.0 - 8.0
CP90S	Short and long term dry film corrosion preventative. Water soluble.	Spray, Immersion or Manual	Ferrous & non-ferrous		May be added to the wash or rinse stage	1 - 10% in rinse	110 -180°F & >120°F for Spray in air	8.9 - 10.9
CP6116	Corrosion and tarnish preventative. May be added to enhance most Kyzen cleaners	Spray, Immersion or Manual	Ferrous & non-ferrous	Controls tarnish and flash rusting	May be added to the wash or rinse stage	0.5 - 2.5%	System temp.	NA
<b>Defoamers</b>								
Kyzen DF10	Sump-side anti-foaming agent	Spray or Immersion	Multi-metal safe	Controls foam	May be added to the wash or rinse stage	1 - 4 oz/100 gal.	System temp.	NA
<b>Additional Additives</b>								
Sonic Boost 22	Surfactant blend ultrasonic energy booster	Immersion Dip	Multi-metal safe		Add to wash stage to reduce squeal and enhance cleaning	0.5 oz/gal.	System temp.	7- 11
Rinse 19	Aqueous rinse aid	Spray, Immersion or Manual	Multi-metal safe	Aids in rinsing	Add to the final rinse	1 - 4 oz/gal.	System temp.	Neutral

# APPLICATIONS LABORATORY OVERVIEW

KYZEN is fully equipped with two Application Laboratories that hold the most current equipment most commonly found throughout manufacturing facilities. Access to these machines allows KYZEN to simulate any cleaning processes. The intention of KYZEN's million dollar application lab is to provide our customers with a risk-free environment that thoroughly evaluates a broad range of processes. KYZEN's Application Laboratory is the best equipped in the industry and provides true value for our customers by saving them time, money, and optimizing efficiency.

## DEFINE YOUR OPTIMUM CLEANING PROCESS

- ➔ NO RISK
- ➔ COST EFFICIENT
- ➔ NO PRODUCTION DISRUPTION
- ➔ EVALUATE COMPLETE PROCESS

## CAPABILITIES

CONVEYORIZED	BATCH	VAPOR DEGREASING	SONIC CLEANING	CORROSION TESTING	EVALUATION TOOLS
Spray-In-Air Systems	CB10 Batch Cleaner	Branson BTC-200	Crest 40 / 50 kHz	Humidity Chamber	High Resolution Digital Microscopes
Spray Under Immersion (SUI)	Aqueous Tech 800 LD	Detrex AVD 210	Branson 70 kHz And 120 kHz	ESPC	FTIR Analysis
	JENFAB LeanClean 360		Ultrasonic Power Corp M5300 40 kHz		MilliPore
	Sonicor AH-3022				

