

PRODUCT BULLETIN

METALNOX® M6440

Mild Alkaline Chelated Aqueous Immersion Cleaner and Brightener

FEATURES & BENEFITS

- MILD PH
- CLEANS & BRIGHTENS
- SAFE ON COPPER, BRASS AND SILVER
- MULTI-METAL SAFE
- SAFE ON PRECIOUS METALS
- LOW VOC
- NO HAP'S
- NO CFC'S
- NO SARA 313'S
- NO SILICATES
- NO PHOSPHATES
- NON-FLAMMABLE
- LOW USE COST
- LONG BATH LIFE
- EFFECTIVE IN ULTRASONIC AND SOAK APPLICATIONS

METALNOX M6440 is an aqueous blend specially designed for optimum effectiveness on scale, metal oxides, dry lubes, light oils, waxes, polishing rouge, and grease while being relatively people-safe and environmentally friendly. Easy to use, M6440 is diluted further with water as desired, or it may be applied as received without damage to delicate substrates if extra cleaning efficiency is needed for more challenging cleaning situations. Water rinse or inhibit with Kyzen CP6115 or CP90S as required to prevent re-oxidation of bare metal surfaces.



TYPICAL SOILS

- SCALE
- METAL OXIDES
- DRY LUBES
- POLISHING ROUGE
- LIGHT OILS
- DRAWING OILS
- GREASE
- WAX
- FINGER PRINTS
- SHOP DIRT
- CARBON

TYPICAL PHYSICAL AND CHEMICAL PROPERTIES:

| | | | |
|----------------------|--------------------|------------------|--------------------|
| Appearance | Clear straw liquid | pH 100% | 7.8-9.8 |
| Odor | Mild | pH 10% | 7.8-9.8 |
| Specific Gravity | 1.118 | VOC, 100% | 14.8 g/L |
| Weight/gallon | 9.31# | VP of VOC Comp. | 8.27 mmHg at 20 °C |
| Flash Point, °F/°C | None to boiling | COD, 0.25% | 865 ppm |
| Boiling Point, °F/°C | 212/100 | Water Solubility | Complete |

SUGGESTED PROCESS PARAMETERS:

| <u>Process Type</u> | <u>Concentration Range</u> | <u>Temperature Range</u> | <u>Rinse/Dry</u> |
|------------------------|----------------------------|--------------------------|------------------|
| Spray; In-line | Not Applicable | | |
| Spray; Batch | Not Applicable | | |
| Immersion, Agitation | 3-100% | amb-160 °F | M6440 or DI/Air |
| Immersion, Soak | 3-100% | amb-160 °F | M6440 or DI/Air |
| Immersion, Ultrasonics | 3-100% | amb-160 °F | M6440 or DI/Air |
| Manual Wipe | 3-100% | ambient | Optional |

The above conditions are meant to be starting ranges. Process parameters may be increased or decreased as needed depending on the specific parts and soils involved. Your Kyzen Sales Representative can assist you in optimizing your process parameters.

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METALNOX M6440

MILD ALKALINE CHELATED AQUEOUS IMMERSION CLEANER

COMPATIBILITY:

METALNOX M6440 is multi-metal safe for use on yellow metals including copper, bronze and brass, silver, aluminum, iron, steel and composites in addition to most precious metals, plastics and rubbers. It is safe to use with PVDF, Kalrez®, Teflon and ceramic elastomers and filters, while it is best used in polypropylene or stainless equipment.

HINTS FOR SUCCESSFUL USE:

- Effective at all-temperatures, performance is optimum at 100-130°F.
- Best results are obtained when parts are completely immersed in M6440.
- To remove all cleaner residue, follow with a thorough rinse. Add Kyzen CP6115 or CP90S at 1-3% to prevent flash rusting if needed.
- Prevent spotting on polished surfaces by final rinsing with deionized (DI) or reverse osmosis (RO) water.

RINSING AND DRYING:

- Use deionized (DI) or reverse osmosis (RO) water to minimize spotting on polished surfaces.
- Keep rinses fresh, monitoring by conductivity or resistivity. Recycle.
- Dry parts to meet production requirements and minimize spotting.

BATH LIFE:

Bath life studies show high loading capacity. This equates to long tank life, low maintenance costs and reduced waste generation and chemical consumption.

MAINTENANCE METHODS:

METALNOX M6440 concentration should be monitored and maintained on a routine and regular basis depending on tank use. Your Kyzen Representative can assist you with this. Best results are obtained with a Dropper Titration Test Kit available from Kyzen.

Refractive Index and Conductivity are alternative methods for tank monitoring.

ENVIRONMENTAL, HEALTH AND SAFETY:

METALNOX M6440 is a non-flammable, non-corrosive biodegradable aqueous solution with 14.8 g/L VOC at 100% dilution. It contains no CFC's or HAP's. Refer to the Material Safety Data Sheet for more information.

STORAGE AND HANDLING:

All ingredients in this product are TSCA listed. It is a non-flammable, non-corrosive liquid. Packaged in polyethylene containers, METALNOX M6440, with the seal unbroken, has a suggested shelf-life of one year. Store out of direct sunlight at 40-100°F.

AVAILABILITY:

METALNOX M6440 is available commercially in one (1) gallon, five (5) gallon and 55 gallon containers.

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