
AUROMEX®

TECHNICAL

INSTRUCTIONS

DATA SHEETS

METROCLEAN MC 200 **PHOSPHATE – FREE ALKALINE ELECTROCLEANER**

INTRODUCTION:

METROCLEAN MC 200 is a high efficiency, phosphate-free alkaline electro-cleaner for copper, copper alloy, white brass and leaded brass prior to nickel plating. It is especially formulated to inhibit the pitting and etching often associated with the electro-cleaning of these metals.

METROCLEAN MC 200 operates over a wide current density range and can tolerate longer cleaning times without serious effects on the basis metal. It is only mildly alkaline and can be used either as a cathodic cleaner or an anodic cleaner, not affected by hard water salts and it is phosphate-free and completely biodegradable.

METROCLEAN MC 200 can frequently provide all the alkaline cleaning required for unbuffered diecastings. Buffed Zinc, on the other hand, usually requires the use of specialized soak cleaners and spray cleaners prior to METROCLEAN MC 200 for the complete removal of buffing compounds and oils.

PRODUCT FEATURES:

- Biodegradable Surfactant System.
- Electro-cleans various non-ferrous and ferrous based metals on the same part without etching.
- Eliminates blistering and peeling on non-ferrous metals due to inadequate activation of ferrous metals.
- Free rinsing.
- Tolerant to long cleaning times.
- High tolerance to hard water.
- Wide range of operating conditions.

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CHEMICALS CORPORATION

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EQUIPMENT REQUIREMENT:

Welded mild steel tanks are satisfactory for METROCLEAN MC 200 and it is recommended that these is fitted with a weir overflow to permit removal of busyant soils. Tank ventilation should be provided to control caustic fumes from hot solutions.

OPERATION CONDITIONS:

For general purposes, it is recommended that ferrous metals are cleaned anodically and non-ferrous cleaned cathodically.

	<u>Optimum</u>	<u>Range</u>
METROCLEAN MC 200	60 g/l	45 – 75 g/l
Temperature	60 °C	55 – 65 °C
Time (minutes)	1	15 – 120 sec.
Current density	2 A/dm ²	1.5-2.5 A/dm ²
Voltage	6 – 9 V	

Chromium stripping:

METROCLEAN MC 200	45 –60 g/l
Temperature	20 – 27 °C
Time (minutes)	2 – 3 minutes
Current density	2 – 5 A/dm ² anodic current

Note : Chromium stripping should be done in a separte line other than the regular plating line to avoid chrome contamination of electro-cleaner and plating bath.

Zinc phosphate removal:

METROCLEAN MC 200 can remove zinc phosphate coatings when used as a soak cleaner at 25 – 40 g/l for 1 – 2 minutes at 70 – 80 °C

SOLUTION CONTROL:

Titrate a 10mls sample with 1.0N Hydrochloric acid using Phenolphthalein as an indicator. (red to colorless)

Metroclean MC 200 g/l = 8.25 x mls HCL

WASTE DISPOSAL:

METROCLEAN MC 200 solutions are alkaline, neutralize to pH 6 to 8 with an acid and discharge to sewer.

CAUTION: METROCLEAN MC 200 is highly alkaline and can cause severe burns. Avoid contact with skin and eyes. Avoid inhaling dust. Wear protective clothing and safety goggles. Flush exposed areas with clean, cold water in case of injury consult a doctor.