



# Mi-Clean 100

Mi-Clean 100 is a free-flowing granular mixture of detergents, wetting agents and builders which, when dissolved in water, work together to provide fast, efficient cleaning of most metals. It is formulated to be used effectively at room temperature. Tenacious soils may require agitation of the work or solution and/or elevated temperatures of 80°F to 140°F. Mi-Clean 100 rinses easily from the work, leaving a chemically clean surface necessary for use with Hubbard-Hall's Black Magic RT and Mi-Tique room temperature processes.

## Features & Benefits

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| Heavy duty alkaline soak cleaner | Cleans water break free |
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## Operating Conditions

Mi-Clean 100 is used at concentrations of 6 to 12 ounces per gallon of water. Dissolve the appropriate amount of Mi-Clean in water while stirring. Premixing in a partially - filled tank is recommended. Warm water aids dissolving. Solutions of Mi-Clean 100 are maintained at the required strength with periodic additions determined by a simple titration method, which will be furnished upon request. Regular additions will keep the solution operating efficiently until excessively contaminated, at which point it must be discarded.

Tanks should be constructed of mild steel. Racks and baskets may also be of mild steel or whatever material is compatible with other metal finishing solutions used thereafter. Do not use galvanized iron, bronze, copper, tin or aluminum tanks, baskets, racks, etc., as these metals will contaminate the solution.

## Titration Method

1. Pipette 10mL cleaner solution into an Erlenmeyer flask and dilute with 50mL of water.
2. Add 5 to 10 drops of Methyl Orange indicator to solution, swirl to insure complete mixing.
3. Titrate with 0.5 N Hydrochloric Acid until solution turns from yellow to reddish orange.
4. Record mL used.

Calculation

$$\text{Concentration (oz/Gal)} = \text{mL } 0.5 \text{ N HCl} \times 0.430$$



## Test Kit Method

5. Measure 1.0 mL of cleaner solution, using a syringe.
6. Place solution in mixing bottle. Fill  $\frac{1}{4}$  with water. Mix well.
7. Add 5 to 10 drops of Methyl Orange indicator.
8. Add 0.72 N Hydrochloric Acid dropwise while swirling the solution until solution turns from yellow to reddish orange.
9. Record the number of drops used.

Calculation

$$\text{Concentration (oz/Gal)} = \# \text{ Drops } 0.72 \text{ N HCl} \times 0.250$$

## Caution

Read and understand the Safety Data Sheet prior to working with Mi-Clean 100. This material contains caustic soda. May cause severe burns. Do not get in eyes, on skin or on clothing. Avoid breathing dusts or mists. Do not take internally. When handling, wear goggles or face shield. While making up solutions, add slowly to surface of solution to avoid violent spattering. In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes. For eyes, call a physician.

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