



Mi-Clean 9 NFL

Mi-Clean 9 NFL is a heavy-duty alkaline soak/spray cleaner which combines high alkalinity for lasting power, along with high detergency and the ability to suspend large amounts of soil. It is also capable of removing that almost invisible light oxide film often presents on steel to ensure more effective post-treatment of the metal. Its use in hard water does not present a problem.

Features & Benefits

Heavy-duty alkaline soak/spray cleaner	Has the ability to suspend large amounts of soil
Capable of removing invisible light oxide film	Post treatment of the steel metal is achieved

Operating Conditions

Solution makeup

Mi-Clean 9 NFL solutions can be made up at concentrations ranging from 5 to 10% by volume and is most often used at 6% by volume. Temperatures may range from 160°F. to boiling with increasing temperatures increasing its effectiveness. Boiling temperatures serve to mechanically dislodge otherwise insoluble soils. Replenishments to the hot Mi-Clean 9 NFL should be made cautiously to prevent splashing.

Chemical control

Mi-Clean 9 NFL cleaning solution can be maintained at peak efficiency by a simple chemical control method. It need not be discarded until contamination reaches a high level.

Equipment

Tanks may be fabricated of mild steel or stainless steel and should be insulated to conserve energy. They should also be adequately exhausted. Galvanized iron, copper, copper alloys, tin or aluminum should not be used in the fabrication of equipment exposed to Mi-Clean 9 NFL.

Titration Method

1. Pipette 10 mL of Mi-Clean 9 NFL solution into a 250 mL Erlenmeyer flask.
2. Add 50 mL of Distilled Water and 5 to 10 drops of Methyl Orange Indicator,



3. Titrate with 0.5 N Hydrochloric Acid until the color changes from yellow to orange.
Calculation

$$Mi-Clean\ 9\ NFL = mL\ 0.5\ N\ Hydrochloric\ Acid \times 1.32$$

Test Kit Method

1. Fill Test Bottle $\frac{1}{4}$ full of water.
2. Using syringe, add a 1 mL sample of Mi-Clean 9 NFL.
3. Add 5 to 10 drops of Methyl Orange Indicator.
4. Add 0.72N Hydrochloric acid test kit solution dropwise until color changes from yellow to orange.

Calculation

$$1\ Mi-Clean\ 9\ NFL = drops\ 0.72N\ Hydrochloric\ acid \times 0.714$$

Caution

THIS MATERIAL IS HIGHLY ALKALINE. CAUSES SEVERE BURNS.

Do not get in eyes, on skin or clothing. Avoid breathing dusts or mists. Do not take internally. When handling, wear goggles or face shield. In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes. For eyes, call a physician.

WARRANTY: HUBBARD-HALL INC. IS NOT RESPONSIBLE FOR THE MISUSE, MISAPPLICATION, OR MISHANDLING OF THIS PRODUCT. SEE THE TERMS AND CONDITIONS OF SALE ON OUR WEBSITE FOR ADDITIONAL TERMS AND CONDITIONS CONCERNING OUR PRODUCTS, INCLUDING BUT NOT LIMITED TO, LIMITATIONS AND DISCLAIMERS OF WARRANTIES AND LIABILITIES.

Our People. Your Problem Solvers.

For more information on this process,
please call us at 203.756.5521 or email: techservice@hubbardhall.com

Hubbard-Hall holds certifications for ISO 9001:2015, Responsible Distribution,



as accredited by the **ACD** (Alliance for Chemical Distributors) and as a **Women-Owned Small Business**, as well as maintaining an association with **Omni-Chem**¹³⁶