

# Cleaner S-078

Cleaner S-078 is a newly developed soak cleaner primarily intended for cleaning brass and copper. One of its paramount advantages is its ability to maintain bright, tarnish-free surfaces on copper and copper alloys even in high temperature solutions.

Cleaner S-078 may also be used for soak cleaning ferrous metals, titanium and nickel alloys, zinc die castings, aluminum alloys.

Cleaner S-078 dissolves readily in hot or cold water giving a clear, brown solution. This powdered, medium alkalinity product contains no phosphates or chelates, thus eliminating the waste disposal problems associated with these elements.

## Features & Benefits

Soak cleaner for cleaning brass and copper	Maintains bright tarnish-free surfaces even in high temperature solutions
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## Operating Conditions

Concentrations	4 – 12 oz/Gal (30 – 90 g/L)
Temperatures	140°F – 200°F (60°C – 90°C)
Time	As required
Equipment	Mild steel tanks and heating coils

### Oblique barrel cleaning

All metals, except aluminum and zinc die castings, use concentration of 4 to 8 oz/Gal (30 to 60 g/L).

Use concentration of 2 to 4 oz/Gal (15 to 50 g/L) for zinc die castings or aluminum alloys.

## Titration Method

1. Pipette a 10 mL sample into a 250 mL Erlenmeyer flask and dilute with 50 mL water.
2. Add 4 drops Methyl Orange indicator and mix.
3. Titrate with 0.5 N Hydrochloric Acid until the color changes from yellow to orange pink.
4. Record mL used.



### Calculation

$$\begin{array}{ll}
 \text{Factor (oz/Gal)} & 0.45 \\
 \text{Factor (g/L)} & 3.38 \\
 \text{Concentration} & = \text{mL } 0.5 \text{ N HCl} \times \text{Factor}
 \end{array}$$

### Test Kit Method

1. Fill test bottle 1/3 with water, add 1/2 mL cleaner solution.
2. Add 3 to 4 drops indicator.
3. 0.72 hydrochloric acid dropwise until solution color changes.
4. Record number of drops used.

### Calculation

$$\begin{array}{ll}
 \text{Factor (oz/Gal)} & 0.67 \\
 \text{Factor (g/L)} & 5.03 \\
 \text{Concentration} & = \# \text{ Drops } 0.72 \text{ N HCl} \times \text{Factor}
 \end{array}$$

### Waste Disposal

Discharge to a disposal system. In order to be completely informed on the latest regulations for your area, please contact the local authorities.

### Caution

Cleaner S-078 is an alkaline product and should be handled accordingly. Avoid skin and eye contact. Wear protective clothing, goggles and gloves. Flush exposed areas immediately with clean cold water. Contact a doctor promptly in case of injury.



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