

# Cleaner 59 SW

Cleaner 59 SW is a powdered, phosphate free, alkaline product which may be used as an electro cleaner (anodically or cathodically) for brass alloys, copper, zinc die castings, slush castings and lead alloy castings.

While Cleaner 59 SW was developed as an electro cleaner for non-ferrous metals, it still may be used as an electro cleaner for ferrous metals. This latter situation may be applied in shops and plants which process a variety of metals through the same line.

## Features & Benefits

|                                                              |                                            |
|--------------------------------------------------------------|--------------------------------------------|
| Phosphate and chelator free-reduces waste disposal problems. | Operates at low temperatures-saves energy. |
|--------------------------------------------------------------|--------------------------------------------|

## Operating Conditions

|                 |                                    |
|-----------------|------------------------------------|
| Concentration   | 4 – 10 oz/Gal                      |
| Temperature     | 110°F – 125°F                      |
| Time            | 20 – 45 sec                        |
| Polarity        | Anodic or cathodic                 |
| Current density | 10 – 30 amps/ft <sup>2</sup>       |
| Equipment       | Mild steel tanks, coils and anodes |
| Ventilation     | Recommended                        |

Note: Increasing Operating temperature above 125°F will tend to darken die casting. Pewter, white metals and slush casting should be cleaned cathodically.

### Brass and Copper

|                 |                              |
|-----------------|------------------------------|
| Concentration   | 4 – 10 oz/Gal                |
| Temperature     | 110°F – 160°F                |
| Time            | 20 – 90 sec                  |
| Polarity        | Anodic or cathodic           |
| Current density | 10 – 40 amps/ft <sup>2</sup> |

|             |                                            |
|-------------|--------------------------------------------|
| Equipment   | Mild steel tanks, heating coils and anodes |
| Ventilation | Recommended                                |

Note: Cleaner 59 SW may be used cathodically on brass alloys, copper and lead alloys. Cleaner 59 SW is free of chelators, consequently the problem of metallic deposition will not become a problem. However, it is still desirable that when cathodic cleaning is used that it be followed by a short anodic cycle.

#### Maintenance Note for Electro Cleaner

When recharging the tank with a fresh solution, be sure that the cathodes are free of sludge and that the bus bars are bright and clean. Sludge cathodes and dirty bus bars act as insulators which will, consequently, reduce the current density

## Titration Method

1. Pipette 5 mL of Cleaner 59 SW solution into 250 mL Erlenmeyer flask.
2. Add 50 mL of water and 4 to 5 drops Phenolphthalein indicator and swirl to mix well.
3. Titrate with 0.5 N Hydrochloric Acid until the solution turns to a clear end point.
4. Record mL used.

Calculation

$$\text{Concentration (oz/gal)} = \text{mL } 0.5 \text{ N HCl} \times 0.85$$

## Test Kit Method

1. Fill bottle 1/3 full of water and add 1/2 mL sample.
2. Add 3 drops of Methyl Orange indicator.
3. Titrate using 0.72 N Hydrochloric Acid, counting the drops, until a clear color endpoint.
4. Record the number of drops used.

Calculation

$$\text{Concentration (oz/Gal)} = \# \text{ Drops } 0.72 \text{ N HCl} \times 0.52$$

## 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.



## Product Bulletin

Product Name: Cleaner 59 SW  
Product Code: 2001005  
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### Caution

Cleaner 59 SW is an alkaline product and should be handled accordingly. Avoid skin, eye and oral contact. Wear protective clothing, gloves and goggles when handling the product. Flush exposed areas immediately with clean, cold water. Contact a doctor immediately in case of injury.

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