

## Technical Data Sheet • CHEMEON® Deox 3100

### Description:

An iron based deox that is similar to CHEMEON® Deox 3000, useful for all wrought and most cast alloys though not as effective as CHEMEON® Deox 3000 on the 2000 and 7000 series. Economical and long lasting. Used at 6 -15% v/v at room temperature for 1 to 10 minutes.

### Operating Conditions:

Method of Application:	Immersion
Concentration:	6 - 15% by volume for aluminum desmutting/deoxidizing 20% for removal of light scale and discoloration
Temperature:	room temperature
Time:	1 - 10 minutes
Tank construction:	304 or 316 stainless steel, polyethylene, or rubber lined tanks

### Solution Control:

#### Acid Concentration:

1. Pipet 10 mL of the desmutting bath into a 250 mL beaker.
2. Add ~50 mL of DI water.
3. Add approximately 2 grams of sodium gluconate and 4 to 5 drops of phenolphthalein indicator.
4. Titrate with 1.0 N NaOH until a pink color appears and lasts for at least 30 seconds.
5. Record the mL of 1.0 N NaOH titrated.
6. Calculation:

$$\text{CHEMEON® Deox 3100 (\% by volume)} = (\text{mL of 1.0 NaOH}) \times 0.95$$

The titration for the acid concentration should be sufficient to control the bath chemistry. If the concentration determined from the titration above is within range and the bath is not performing properly, the following titration should be performed.

#### Iron Concentration:

1. Pipet 10 mL of the desmutting bath into a 250 mL beaker.
2. Add ~100 mL of DI water.
3. Add 20 mL of sulfuric acid (50%) and 4 grams of potassium iodide.
4. Mix for 20 minutes.
5. Titrate with 0.1 N  $\text{Na}_2\text{S}_2\text{O}_3$  until the reddish color changes to light yellow.
6. Add 5 mL of starch indicator and continue titrating until the color changes from blue to clear and the clear color persists for 30 seconds.
7. Record the mL of 0.1 N  $\text{Na}_2\text{S}_2\text{O}_3$  necessary to reach the clear color.



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8. Calculation:

$$\text{CHEMEON® Deox 3100 (\% by volume)} = (\text{mL of 0.1 N Na}_2\text{S}_2\text{O}_3) \times 0.93$$

Should the CHEMEON® Deox 3100 concentration differ between the acid and iron analyses, call the CHEMEON Tech Center for information on how to balance the bath.

### **Physical and Safety Data:**

CHEMEON® Deox 3100 is highly acidic which requires the use of rubber gloves, face shields and protective clothing. In case of contact, flush with water. If material gets in the eyes flush with water and see a physician. Do not take internally.

### **Packaging:**

55 gallon drum  
5 gallon pail

### **Storage:**

CHEMEON® Deox 3100 should be stored in a cool, dry area away from alkaline material. Keep container closed when not in use.

### **Waste Disposal:**

CHEMEON® Deox 3100 may require neutralization to a specified pH range depending on Federal, State, and local waste treatment regulations. This product contains iron and fluoride, are regulated in some areas.

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