

SUPER BEE™ 400TG-ML CLEANER *by Cee-Bee®*



d a t a s h e e t

SUPER BEE 400TG-ML is a liquid concentrate formulated to remove greases, oils, and particulate soil from aluminum alloys, other non-ferrous metals, and steel. Super Bee 400TG-ML provides long bath life and excellent soil holding and suspension.

BENEFITS

- Excellent grease, oil, and particulate remover.
- Low foaming when used in agitated tanks.
- Does not contain non-phenol ethoxylate (NPE) or other alkyl phenol ethoxylates (APE's).
- Safe on steel, aluminum, titanium, magnesium and copper alloys.
- Does not contain chromium or solvents.
- Completely aqueous and non-flammable.

CONFORMS TO

- **AMS 1537B**
- **BOEING BAC 5749**
- **BOEING DPM 6629**
- **LOCKHEED MARTIN STM32-306 Rev. NC dated 4FEB98**

**NOTE: To place an order, call or FAX Customer Service at
800-932-7006 / FAX 216-441-1377
Super Bee 400TG-ML Cleaner Product Code: 20118**

NOTES PRIOR TO HANDLING

Before using any Cee-Bee, Inc. product, all safety and operating instructions should be read and understood. If you have any questions, please contact your Cee-Bee representative before proceeding.

USE PROCEDURES

Immersion Tank Cleaning

Mix in water at 10% - 25% by volume, depending on degree of contamination. A typical concentration is 15%.

1. Immerse parts in bath at 100-160°F (39 - 70°C) for 5 to 30 minutes. Best results are obtained if the solution is agitated either mechanically or with eductors.
2. When cleaning is complete, remove parts from bath and allow excess solution to drain back into the tank.
3. Spray rinse parts over tank and immerse in an air-agitated, overflowing water rinse tank.

SOLUTION CONTROL

- **Operating Temperature** - Operating the solution below the recommended temperature will reduce cleaning performance.
- **pH** - To insure optimum performance, maintain bath pH within the range of 9.5 to 12.0 using a reliable pH meter. Depending on soil drag-in, normal additions of SB 400TG-ML to replace standard usage should be enough to maintain the bath within the correct pH range and no special additions of SB 400TG-ML are necessary.
- If the pH begins to approach its lower limit, then add additional SB 400TG-ML to increase the pH. Generally, this will require 0.5% by volume to raise the pH 0.1 units.

SOLUTION CONTROL

- If air agitation is used, then the pH may decrease as carbon dioxide is introduced into the bath. In this case, Super Bee 300 LF Liquid PH Adjuster may be needed to keep the bath within the pH limits. If required, approximately 0.024% of the tank volume of PH Adjuster will raise the pH 0.1 units. (0.24 gallons of PH Adjuster per 1000 gallons of bath).

TITRATION METHOD

Scope:

To determine concentration of Super Bee 400TG-ML baths at the shop level.

Reagents and Equipment:

pH Meter	0.1N acid, standard
250 ml Erlenmeyer flask	Deionized or distilled water
50 ml Burette	
50 ml Volumetric pipette	

By Titration:

1. Pipette 50 ml of tank solution into a 250 ml Erlenmeyer flask.
2. Add approximately 50 ml DI water.
3. Titrate with 0.1N acid to pH of 9.0 and record ml acid as A.
4. Continue titration to a pH of 4.0 and record total ml acid as T.

Calculations:

$$(T - A) \times 1.16 = \% \text{ (vol.) Super Bee 400TG-ML}$$

IMPORTANT NOTE: Analysis by pH is subject to much interference. Make a standard using the water used for makeup to confirm that the analysis is giving reliable results. Variation in water or shop contaminants can greatly alter your results. This titration method should be used only as a guideline.

SOLUTION CONTROL (continued)

UV SPECTROPHOTOMETER METHOD

Reagents & Equipment

De-ionized water
UV spectrophotometer
10 mm quartz cuvettes
2 ml Class A volumetric pipette
100 ml Class A volumetric flask

Analysis Procedure

1. Pipette 2 ml from a foam-free sample of SUPER BEE 400 TG-ML working bath to a 100 ml volumetric flask.
2. Dilute the flask to volume with de-ionized water, stopper, and mix well by gentle inversion (keep foam to a minimum).
3. Measure the absorbance of this dilution using a 10 mm quartz cuvette at 272 nm. Use de-ionized water as a reference blank.
4. Calculation:
(Volume %) SB 400TG-ML concentration = (sample absorbance @ 272 nm) X (8.85).

REFRACTOMETER METHOD

Scope:

To determine the approximate concentration of Super Bee 400 TG-ML baths at the shop level.

Hand Refractometer (0-10 scale).

By Refractometer Reading:

1. Allow a sample of the Super Bee 400 TG-ML bath to cool to room temperature ($25\pm 2^{\circ}\text{C}$).
2. Thoroughly mix the sample and immediately apply a few drops to the inclined rectangular window of the refractometer.
3. Immediately close the plastic cover over the window.
4. Hold the instrument up to a strong light and read the refraction value on the scale of 0 to 10 units (water will read 0).

Calculations:

Refractometer Reading x 3.85 = % by volume of Super Bee 400 TG-ML.

PROPERTIES

- A clear to slightly hazy, pale yellow liquid.
- No flash point. Mild surfactant odor.

SAFETY & HANDLING

- Skin or eye contact can cause irritation. Chemical goggles or face shield and chemical-resistant gloves are recommended.
- In case of accidental contact, flush area thoroughly with water. If irritation persists, seek medical attention.
- Do not take internally.

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