

# SUPER BEE™ 300LFM CLEANER

by Cee-Bee®



## data sheet

**SUPER BEE 300LFM** is a low-foaming liquid concentrate for use in spray wash and immersion cleaning applications.

### BENEFITS

- Excellent grease and oil remover.
- Low foaming when used in agitated tanks or spray washers.
- Free rinsing.
- Safe on steel, aluminum, titanium, magnesium and copper alloys.
- Safe on most paints and plastics.
- Non-flammable.

### CONFORMS TO

- **QPL TO MIL-PRF-29602A**
- **USAF Source Control Drawing 9825019 Rev. D (T.O. 4W-1-61/T.O. 4B-1-32/T.O. 4S-1-182)**
- **LOCKHEED-MARTIN EMAP G32.0200 Specification: LMC 32-2089C, Type 1, Class 2**
- **LOCKHEED-MARTIN EMAP G32.0200 Specification: STM 32-301C, Type I, Class 1A**
- **LOCKHEED-MARTIN EMAP G32.0206 Specification: STM 32-301C, Type 11, Class 1A**
- **NSN 6850 01 431 2267 - 5 Gallon Drums**
- **NSN 6850 01 431 2268 - 55 Gallon Drums**
- **BOEING HMS20-1267/2125 = Aqueous Degrease, Metals, General, Immerse/Spray**
- **BOEING HMS20-1267/2126 = Aqueous Degrease, Castings, Alum/CRES, General, Immerse/Spray**
- **BOEING HMS20-1267/2127 = Aqueous Degrease, Castings, Mg, General, Immerse/Spray**
- **BOEING HMS20-1267/2128 = Aqueous Degrease, Penetrant Inspection, General, Immerse/Spray**

**NOTE: To place an order, call or FAX Customer Service at  
800-932-7006 / FAX 216-441-1377  
Super Bee 300LFM Cleaner Product Code # 20151**



## **NOTES PRIOR TO HANDLING**

**Before using any McGean product, the MSDS should be read and understood. If you have any questions, please contact your McGean representative before proceeding.**

## **USE PROCEDURES**

### **Spray Washer Cleaning**

1. Charge tank with a 5% to 20% by volume in-water solution of Super Bee 300LFM (depending on degree of contamination) and heat to 120 - 160°F (50 - 70°C).
2. Spray wash for 5 to 30 minutes as required.
3. If spray washing equipment does not employ a rinse cycle, spray rinse parts with water or immerse in an air-agitated, overflowing water rinse tank.

### **Immersion Tank Cleaning**

1. Mix Super Bee 300 LFM Cleaner at 10 – 25% by volume with water. The concentration depends upon the degree of contamination.
2. Immerse parts in an agitated bath at 120 – 160 °F (50 – 70 °C) for 5 to 30 minutes. Agitation may be mechanical (recommended) or clean air.
3. When cleaning is complete, remove parts from bath and allow excess solution to drain back into the tank.
4. Spray rinse parts over tank and then immerse in clean, agitated water rinse tank.

## SOLUTION CONTROL

Follow the solution control procedures below. If concentration and pH are within their recommended ranges, and performance is not satisfactory, the tank should be dumped and recharged with a fresh solution of Super Bee 300LFM. Under normal usage, this could range anywhere from 6 months to 2 years depending on the type of soils and throughput.

- **OPERATING TEMPERATURE** - Operating the solution below the recommended temperature will reduce cleaning performance.
- **pH CONTROL**  
Equipment
  - pH meter or reliable pH paper.
- **PROCEDURE**
  1. Maintain pH within a range of 10.0 to 12.0 using the pH meter or pH paper.
  2. Liquid pH Adjuster (Product Code # 20101)  
If pH falls below 10.0, add with agitation 3 liquid ounces pH adjuster for each 100 gallons (240 ml per 1000 liters) of tank solution to increase pH by 0.1 unit.

**CONCENTRATION** - Super Bee 300LFM can be maintained using two analytical methods. For most applications, either of the procedures outlined below are applicable (Refractometer or UV Spectrophotometer). For those situations where Super Bee 300LF pH Adjuster is used extensively, the UV Spectrophotometer method must be used to obtain reliable results. In most cases, this will be limited to aluminum cleaning operations during manufacturing of aircraft/aerospace components or tanks seeing extensive cleaning operations.

### **BY REFRACTOMETER READING**

#### **Equipment**

1. Hand Refractometer (0-30 scale).

#### **Procedure**

1. Allow a sample of the **Super Bee 300LFM** bath to cool to room temperature.
2. Thoroughly mix the sample and immediately apply a few drops to the inclined rectangular window of the refractometer using a rod to make the transfer.
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 30 units (water will read -0-).

#### **Calculations:**

% by volume of **Super Bee 300LFM** = 5.0 X Refractometer Reading.

**SOLUTION CONTROL (Continued)**

**BY UV SPECTROPHOTOMETER**

**Equipment**

1. UV Spectrophotometer
2. 10 mm quartz cuvette
3. 2 ml Class A volumetric pipette
4. 100 ml Class A volumetric flask

**Procedure**

1. Pipette and transfer a 2 ml aliquot from a sample of the **Super Bee 300LFM** bath to a 100 ml volumetric flask.
2. Dilute the flask to volume using deionized water, stopper, and mix well by gentle inversion to keep foam at a minimum.
3. Measure the absorbance of this solution using a 10 mm quartz cuvette at 272 nm. Deionized water can be used as a reference blank.
4. Calculate the % **Super Bee 300LFM** using the following equation:

$$\% \text{ Super Bee 300LFM (by volume)} = 10.3 \times \text{absorbance units.}$$