

Cee-Bee® A-7X7

Cee-Bee® A-7X7 is an aqueous alkaline cleaner used for immersion, ultrasonic, spray/rinse, steam injection and pre/post NDT cleaning applications. Cee-Bee® A-7X7 is also approved for turbine engine degreasing prior to teardown.

Conforms To

- Airbus
- ARP & ASTM
- Boeing
- CFM56
- General Electric
- Goodrich
- Goodrich & Messier
- Honeywell
- International Aero Engines
- Messier-Bugatti & Goodrich
- Pratt & Whitney
- Rolls Royce
- Safran

Full Listing on Page 2

Benefits

- Excellent for removing greases and oils in immersion or spray-on applications.
- Effective in ultrasonic cleaning applications.
- Effective at ambient temperature for hand-cleaning operations.
- Free rinsing.
- Safe on steel, aluminum, titanium, magnesium and copper alloys.
- Safe on most paints and plastics.
- Surfactants biodegradable.

Properties

- A clear to slightly hazy liquid
- Mild solvent odor

Notes Prior to Handling

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

Conforms To (Continued)

- Airbus
 - Application Code: 08CJA1
 - CML 11-033
 - Product Code: 867900
- ARP
 - ARP 1755A
 - ARP 1795
- ASTM
 - ASTM-F-945
- Boeing
 - BAC 5763 (Type I)
 - SOPM 20-30-03
 - SOPM 20-60-01
- CFM
 - CP 2469
- General Electric
 - C04-165
 - 70-21-15
- Goodrich
 - CMM 32-40-24
 - CMM 32-40-44
 - CMM 32-40-50
- Goodrich & Messier
 - CMM 32-41-75
 - CMM 32-41-89
- Goodrich & Messier-Bugatti
 - CMM 32-41-83
- Honeywell
 - CMM 32-40-13
 - SPM 32-49-01
- International Aero Engines
 - Comat 01-339
- Military
 - T.O. 2J-1-13
- Pratt & Whitney
 - SPMC 104
- Rolls Royce
 - OMAT 1/24J
- Safran
 - DMR 70-700

Use Procedure

Hot Tank Cleaning

1. Fill the operating tank to approx. one-half capacity with water. Add the desired amount of Cee-Bee[®] A-7X7 and bring to full tank volume with water. Stainless steel (300 series) is recommended for containing Cee-Bee[®] A-7X7.
2. Operating concentration and temperature may vary with soil difficulty and range between a 10% to 30% (by volume) solution at 120°F to 160°F (49-71°C). For most applications a 10% to 25% (by volume) solution at 140°F (60°C) for 10 to 30 minutes provides satisfactory results. Please see OEM's recommendations for specific concentration and temperature ranges.

Spray-On Cleaning and Degreasing Engine Exteriors

1. Mask all openings to the engine interior (the inlet, exhaust, fuel and oil lines left open, bleeders, breather tubes and open electrical connectors).
2. Spray, steam or foam on Cee-Bee[®] A-7X7. Allow to dwell 10 to 20 minutes.
3. Flush with warm or hot water.

Ultrasonic Cleaning

1. Mix in water at 15% to 25% and operate at 120 - 140°F (49 - 60°C), for 5 to 15 minutes.

Operating Temperatures

- Operating the solution below the recommended temperature will reduce cleaning performance.

Safety, Handling, and Precautions

- Can cause irritation. Avoid eye contact and prolonged skin contact. Wear face shield or goggles and rubber gloves.
- In case of accidental contact, flood with water. If eye irritation persists, seek medical attention. Do not take internally.

Solution Control

Cee-Bee[®] A-7X7 pH Maintenance

- To ensure optimum performance, maintain bath pH within the range of 10.0 to 12.0 using a reliable pH meter. To adjust pH, use Super Bee™ 300LF Liquid pH Adjuster with agitation. Addition should be approximately 0.02% of tank solution to increase pH by 0.1 unit.

Concentration

- Cee-Bee[®] A-7X7 solution concentrations can be determined by:
 - UV Spectrophotometer
 - Titration
 - Hand Refractometer (0-30 Scale)
- **NOTE:**
 - Titration and Refractometer methods may not work as reliably if used on contaminated baths or where pH Adjuster has been used heavily. Consult your local Cee-Bee[®] representative when in doubt.

UV Spectrophotometer Method

Reagents & Equipment

- Deionized 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 Cee-Bee[®] A-7X7 working bath to a 100 ml volumetric flask.
2. Dilute the flask to volume with deionized 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 275 nm. Use de-ionized water as a reference blank.

Calculation

(Volume %) Cee-Bee[®] A-7X7 concentration = (sample absorbance @ 275 nm) X (13.9).

Solution Control (Continued)

Titration Method

Reagents & Equipment

- Deionized water
- 0.1N acid, standard sulfuric acid
- 0.1% Methyl orange indicator (aq.)
- pH meter
- 250 ml Erlenmeyer flask
- 50 ml burette
- 10 ml class A volumetric pipette

Analysis Procedure

1. Pipette 10 ml of tank solution into a 250 ml Erlenmeyer flask.
2. Add approximately 50 ml DI water and 3 - 5 drops of 0.1% Methyl Orange indicator.
3. Titrate with 0.1N acid until color changes from yellow to red or to pH 4.0 end point.

Calculation

$$\text{ml of 0.1 N acid titrated} \times 2.8 = \% \text{ (vol.) Cee-Bee}^{\text{®}} \text{ A-7X7}$$

Refractometer Reading Method

Reagents & Equipment

- Hand Refractometer (0-30 scale)

Analysis Procedure

1. Allow a sample of the Cee-Bee[®] A-7X7 bath to cool to room temperature (25±2°C).
2. Thoroughly mix the sample and immediately apply a few drops to the inclined rectangular window of the refractometer using the plastic rod provided 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-).

Calculation

$$\text{Refractometer Reading} \times 4.45 = \% \text{ by volume of Cee-Bee}^{\text{®}} \text{ A-7X7}$$

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Revision: 09/2021 (Rev. A3)