

## SMT Detergent Corp.

4607 Lakeview Canyon Rd. #264, Westlake Village, CA 91361 U.S.A.

Tel: +1(818) 707-3110 • Fax: +1(818) 707-3117

Web Site: <http://www.SMTdetergent.com> • E-mail: [sales@SMTdetergent.com](mailto:sales@SMTdetergent.com)

Made in U.S.A.



## TECHNICAL PRODUCT DATA

### Smart Sonic's 440-R® SMT Detergent

For **MSDS** go to: [www.SMTdetergent.com](http://www.SMTdetergent.com)

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#### DESCRIPTION

EPA Verified 440-R SMT Detergent is a mild alkaline formulation designed to remove grease, oils, solder paste and flux residue from metal, plastic and ceramic surfaces. Excellent for heat-sensitive and low temperature cleaning applications where the wash temperature must be between ambient and 160° F. 440-R SMT Detergent is also very effective in removing wet epoxy adhesives from stencils and misprinted substrates and removing post solder flux residues from pallets, oven radiators and other tooling. It contains no CFCs, VOCs, HAPs, terpenes, alcohol or other hazardous ingredients and performs in ultrasonic, spray or manual cleaning applications. When used in spray equipment, Smart Sonic Defoamer should be used as directed to reduce foaming activity.

**440-R SMT Detergent was certified by the California Environmental Protection Agency (1999) and verified for specific parameters of environmental safety, user safety and cleaning efficiency by the U.S. Environmental Protection Agency (EPA).** It has also been certified as a "Clean Air Solvent" by the South Coast Air Quality Management District's (AQMD) CAS Program (1997) and is RoHS Compliant.

#### PHYSICAL PROPERTIES

Appearance: Clear Purple Liquid  
Odor: Mild, pleasant  
PH (10% solution): 11.9 – 12.0  
Flash Point: None  
Foaming: Medium  
Rinsing: Complete  
Hard Water Stability: 500 ppm  
Biodegradable: Yes  
Hazardous Ingredients: None

#### APPLICATION

Ultrasonic Applications  
Spray Under Immersion  
Soak Bath  
Spray-in-air Applications  
\*\*Spray-in-air applications may require the addition of defoamer

#### Concentration in Plain or DI Water

10% - 25% ambient - 160°F (71°C)  
10% - 25% ambient - 180°F (82°C)  
10% - 25% ambient - 180°F (82°C)  
10% - 25% ambient - 180°F (82°C)

Excellent filtration characteristics for extending useful life in grease, oil and flux cleaning applications

440-R SMT Detergent is not consumed during the solder paste cleaning process. After the initial charge, no addition of make-up chemistry is required until the wash water is changed. The wash water should be changed, for preventative maintenance purposes, every 1 - 3 months to prevent potential contamination and unpleasant odors. For applications other than cleaning solder paste, wash water maintenance will depend on volume, contaminant and filtration system.

440-R SMT Detergent rinses thoroughly with small amounts of clean ambient water. Cleaning applications, other than solder paste, may require a filtration system to reduce "loading" of the bath. Consult factory.

While 440-R SMT Detergent will perform well in "hard water" (500 ppm), it is recommended that either soft or DI water be used in order to prevent mineral deposits (water spots) on stencils and ionic contamination on PCBs.

#### PRODUCT SAFETY

Materials: Safe on all metals, plastics and ceramics when used as directed.

Environmental: Certified safe and effective by the California Environmental Protection Agency (1999) and verified by the U.S. EPA's Environmental Technology Verification (ETV) Program. 440-R SMT Detergent was also certified as a "Clean Air Solvent" by the South Coast Air Quality Management District's (AQMD) CAS Program (1997). For more information, visit the following Web Sites:

<http://www.epa.gov/etv/verifications/vcenter6-10.html> and  
<http://www.calepa.ca.gov/CalCert/CertifiedTech/SmartSon.htm>

Personnel: Contains no hazardous ingredients. Consult MSDS for complete safety details.

Shelf Life: The recommended shelf life is two-years for unopened containers that are stored at temperatures between 40 – 110 degrees F. (5 – 38 degrees C.) and one-year for open containers.

**SMT Detergent Corp. is the exclusive distributor of Smart Sonic's 440-R SMT Detergent.**