

SMarT Sonic - SMT Detergent Corp.

837 E. 79th St., Cleveland, OH 44103

Tel: +1(818) 610-7900

Website: <http://www.SMarTSonic.com> • E-mail: smt@SMarTSonic.com

Made in U.S.A.



TECHNICAL PRODUCT DATA

440-R[®] SMT Detergent

December 2025

DESCRIPTION

EPA Verified 440-R SMT Detergent is a mild alkaline formulation designed to remove RA, RMA, No Clean, Water Washable (OA) and Lead-Free solder pastes from screens, stencils and misprinted PCBs at temperatures between ambient and 100°F (38°C). 440-R SMT Detergent is also very effective in removing wet SMD adhesives from stencils and misprinted substrates and removing post solder flux residues from pallets, oven radiators and other tooling. It contains no CFCs, VOCs, 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.

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 & REACH Compliant.

Physical Properties		Application	Concentration in Plain or DI Water
Appearance:	Clear Pale Yellow Liquid	Ultrasonic Machines	10% - 15% ambient -140°F (60°C)
Odor:	Mild, pleasant	RMA Solder Paste	10% - 15% ambient - 100°F (38°C)
pH	11.9 – 12.0	No-Clean Solder Paste	10% - 15% ambient - 100°F (38°C)
Flashpoint	None	Water Washable (OA)	1% - 5% ambient - 100°F (38°C)
Foaming:	Medium	Lead-Free Solder Paste	10% - 15% ambient - 100°F (38°C)
Rinsing:	Complete	SMD Adhesives	1% - 5% ambient - 100°F (38°C)
Hard Water Stability:	500 ppm	Pallets Oven Radiators	10% - 15% 90° - 140°F (32 - 60°C)
Biodegradable:	Yes	Nano-Coated Stencils	3% - 5% ambient - 100°F (38°C)
Hazardous Ingredients:	None	Spray Machines (manufactured by others)	10% - 15% 90° - 110°F (32 - 43°C) Use defoamer as directed.
VOC's	None		

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.

Always "degas" fresh wash solution by running the ultrasonics for 15 minutes without any objects in the bath such as a stencil or parts basket. This procedure needs to only be performed once after changing bath solution or when adding water and/or cleaning chemistry. Dissolved gases in the wash solution will inhibit proper ultrasonic cavitation.

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. 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 Site:
<http://archive.epa.gov/nrmrl/archive-etv/web/html/fp-pprwt.html>

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

Shelf Life: The recommended shelf life is three-years for unopened containers that are stored at temperatures between 40 – 110 degrees F. (5 –43 degrees C.) and one-year for open containers.

* <http://archive.epa.gov/nrmrl/archive-etv/fp-pprwt.html#acbc>