

VALTRON® FORMULATED DETERGENTS**SW4174****Detergent for Stencil & Uncured Solder Paste Cleaning**

VALTRON® SW4174 is a high-purity, water-based alkaline detergent formulated for the removal of uncured (raw) solder paste, SMT print residues and surface-mount adhesives from stencils, misprinted printed circuit boards and associated print-process tooling. It rapidly wets and penetrates fine-pitch apertures, dissolving the flux vehicle while dispersing released solder powder so that contamination is carried away rather than redeposited or left to clog apertures and filters. Its low-foaming profile makes it well suited to spray-in-air stencil cleaning systems, ultrasonic baths and immersion processes, delivering a clean, residue-free surface after a deionized (DI) water rinse.

UNIQUE FEATURES

- Formulated to remove uncured solder paste, print residues and SMT adhesive from stencils and misprinted PCBs
- Rapid wetting and penetration of fine-pitch and area-array apertures
- Disperses released solder powder to reduce redeposition and aperture blockage
- Low-foaming — suited to spray-in-air stencil cleaners, ultrasonic and immersion equipment
- Contains corrosion inhibitor for compatibility with stainless-steel and electroformed nickel stencil foils
- Good risibility with DI water, leaving no print-affecting residue

APPLICATION

VALTRON® SW4174 is supplied as a concentrate for dilution with deionized water and is compatible with spray-in-air, ultrasonic and immersion stencil cleaning equipment. Because uncured solder paste is not thermally set, it is generally removed at lower concentrations than baked-on, post-reflow flux residues; typical working dilutions fall in the range of 5 – 15% v/v, with the optimum set by soil loading, paste chemistry and equipment during process qualification. Bath temperature, wash time and spray pressure should be established and recorded as part of equipment set-up. For wipe-roll, under stencil and printer-maintenance use, confirm material compatibility with the equipment manufacturer before adoption.

MATERIALS COMPATIBILITY

The formulation incorporates a corrosion inhibitor to protect stainless steel and electroformed nickel stencil foils. As with any alkaline detergent, compatibility with exposed solder alloys (e.g. SAC305, Sn/Pb), aluminum tooling and other sensitive substrates should be confirmed for the specific contact time and temperature prior to production use. Where a process holds parts in extended contact with the working bath, a short compatibility check is recommended.

TYPICAL PHYSICAL PROPERTIES

Appearance	Clear, Light Yellow to Brown Liquid
Specific Gravity 25°C	1.020 ± 0.10
pH (Concentrate)	13.00 ± 0.50
pH (10%)	12.00
Cloud Point (Concentrate)	44°C
Surface Tension (5%)	38.49 dynes/cm

The low surface tension at working dilution supports rapid wetting and penetration of fine apertures.

PACKAGING

VALTRON® SW4174 detergent is available in 5 gallon pails and 55 gallon drums and packaged in high-purity HDPE containers.

For technical service, please call us or email us at technicalservices@valtechcorp.com

U.S. & Europe: 2113 Sanatoga Station Road, Pottstown, PA USA 19464 | 610 705 5900 | info@valtechcorp.com

China: Building 7, No. 1288 Cang Gong Road, Feng Xian District, Shanghai, China 201417 | +86 21 5744 8080

Malaysia: 8, Jln. Sg. Kayu Ara 32/31, Tmn. Perusahaan Berjaya, 40460 Shah Alam, Selangor, Malaysia | +6010 8822 918

Information herein is accurate to the best of our knowledge. Suggestions are made without warranty or guarantee of results. Before using, user should determine the suitability of the product for its intended use and user assumes the risk and liability in connection therewith. We do not suggest violation of any existing patents or give permission to practice any patented invention without a license. Certified ISO 9001:2015. VALTRON® is a registered trademark of Valtech Corporation.

TB-SW4174-SC, Rev. A, 6/15/2026