

SVC-14

POSITIVE PHOTORESIST STRIPPER

SVC-14™ is a high performance positive photoresist stripper formulation developed by SVC to strip photoresist and residue from advanced microelectronic devices. This non-NMP formulation delivers improved performance on hard baked, ion implanted, deep UV baked, and plasma etched resists without damage to sensitive thin films. SVC-14 has been engineered to be non-corrosive and highly effective for metal lift-off applications with acute mill ports.

With a near neutral pH, SVC-14 is free from organic acids/bases and is ideal for GaAs semiconductor and optoelectronic devices that employ group III-V metals and their metal alloy substrates.

FEATURES AND ADVANTAGES

- Rapid stripping of (+) photoresist hard baked to > 200 °C
- Excellent metal lift-off performance
- Effective for post plasma etch residue
- Non-Corrosive to Al, GaAs, AlGaAs, InP, Ti, W, Co, Cr, Cu, Fe, Ni, Al₂O₃, and other sensitive alloys
- No intermediate solvent rinse required
- High loading capacity (> 1000-6" wafers per process set up)
- Low operation temperature 50-80 °C
- Compatible with automated immersion and chemical spray processors
- 100% Water soluble
- High boiling point with low VOC emissions
- Non-Toxic and 100% biodegradable
- NFPA Hazard Code: H=2 F=2 R=0

Note: The information contained in this document is based upon research and is considered accurate to the best of our knowledge. However, no warranty is expressed or implied regarding the accuracy and/or results to be obtained.

SVC-14 TECHNICAL NOTE

Each batch of SVC-14 is analyzed for assay, organic impurity, metal cation, and inorganic anion impurities. Stringent quality control procedures ensure batch to batch consistency and high purity.

PHYSICAL PROPERTIES

Specific Gravity	1.110 @ 25 °C
Water Solubility	100%
Boiling Point	197 °C
Flash Point	90 °C
Color	Clear to Straw

SPECIFICATIONS

Sodium	100 ppb MAX
Potassium	100 ppb
Copper	100 ppb
Iron	100 ppb
Nickel	100 ppb
Chloride	1.0 ppm
Particulate	0.5µ 100 cts/ml MAX

See Product Specification for complete listing

PACKAGING

SVC's strippers are packaged in certified particle-free HDPE 1 gallon containers; Cleanroom Bagged and Sealed (4 gal/case). Also available in HDPE, 55 gallon poly drums with or without Teflon dip tubes for automated chemical delivery systems. Specialty packaging, such as reusable totes and IBCs, available based on volume and location.

STORAGE & DISPOSAL

SVC-14 should be stored in a cool 65~85 °F (18~30 °C), dry, well ventilated area. Keep away from all sources of ignition, and strong oxidizing agents. SVC-14 is 100% biodegradable and non-toxic. Most waste water treatment facilities can readily degrade SVC-14. With a high BTU value, SVC-14 can also be fuels blended and incinerated for minimal disposal costs. All methods should comply with federal, state, and local regulatory laws. See MSDS for complete storage & disposal information.

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Rev.04/00

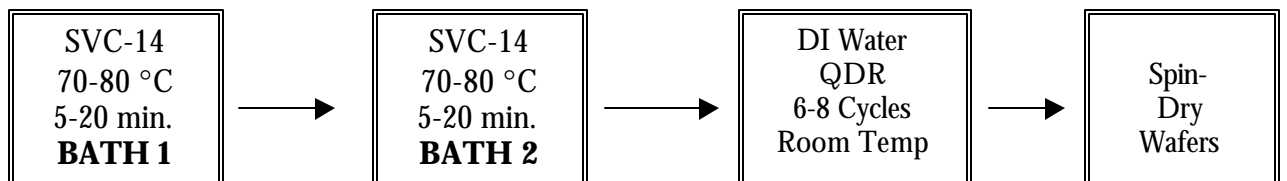
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PHOTORESIST REMOVAL APPLICATION NOTE {Wet Bench Immersion Process}

SVC-14 is a high performance polar solvent suitable for stripping positive photoresist and other organic films from electronic devices. The following is a general guideline for immersion wet bench process setup. The operating temperature and process time may be adjusted for specific conditions and individual applications.

Recommended Process

1. Set up two stripping tanks of SVC-14.
2. Set solvent tank temperatures between 70-90 °C (80 °C baseline).
3. Place dry wafers in bath #1 for 5~20 minutes (mechanical or sonic agitation recommended).
4. Transfer the wafers from bath #1 to bath #2 for 5~20 minutes.
5. Transfer the wafers to a D.I. water rinse tank (quick dump rinse) for 6-8 cycles.
6. Spin-dry the wafers.



Material Compatibility

SVC-14 Positive Photoresist Stripper

SVC positive photoresist strippers and polymer removers are environmentally safe formulations and are replacements for standard toxic solvents. It is recommended that material compatibility should be examined in wafer process equipment. Incompatible materials have shown weight gain, weight loss, change in shape, or discoloration according to comprehensive material compatibility tests. The following table is based upon immersion tests performed at elevated temperatures (80 °C) for a period of one week. Compatibility should be verified with materials found in filters, filter housings, tank materials, process plumbing (valves, pumps, and etc.), and O-rings before use. Standard PM (Preventive Maintenance) procedures need to be performed regularly to identify and replace worn components.

Compatible Materials

Stainless Steel 304
Stainless Steel 316
Pyrex® or Vycor® glass
Quartz
Teflon®
Kalrez®
Teflon FEP
Teflon PTFE
Teflon Encapsulated O-Ring
Polypropylene ¹
Polyethylene ¹

Incompatible Materials

PVC (Polyvinyl Chloride)
PVDF (Polyvinyl Fluoride)
KYNAR®
Polyurethane
Viton®
Buna-N®
Polypropylene (Softens @ temp.>60 °C)
Polyethylene (Softens @ temp.>60 °C)
Polycarbonate
EPDM
Silicone

Glove Compatibility

SVC recommends Butyl gloves for prolonged contact with chemicals. Heavy duty Neoprene/Latex and Nitrile/Latex have shown good results in laboratory tests.

Polyurethane, Latex, and Vinyl gloves are suitable for temporary, disposable usage. However, test results indicate softening with extended chemical contact.

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Teflon® , Kalrez® , and Viton® are trademarks of E.I.duPont deNemours Co.
Kynar® is a trademark of Penwalt Corporation.
Buna-N® is a trademark of Pittway Corp.

Note 1- Polyethylene & Polypropylene are compatible with SVC-14 at room temperature.