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# *Electronic Cleaner Concentrated Cleaning Formula*

## APPLICATIONS AND USE

Branson EC Concentrated Cleaning Formula is an alkaline ultrasonic cleaning solution which is a low foaming, liquid detergent, specially formulated to remove oils, resins, rosins, and other soils from hard surfaces normally encountered in electronic, plating, and other related industries.

Branson EC is an ideal cleaner for demanding applications in electronics cleaning. Because it contains no conductive metal cations, it cannot leave conductive residues. Once a part or assembly has been cleaned with Branson EC, it stays clean. Its coupling ability keeps soils suspended in the cleaning solution preventing redeposition on cleaned material. In addition, it is not flammable and is corrosion inhibited.

Branson EC cleaning solution meets the most demanding environmental requirements, since it is a biodegradable aqueous cleaner, with no ozone-depleting potential and low volatile organic content.

Branson EC can be used in a variety of electronic industry cleaning applications, including: cleaning during manufacturing assembly of infrared detectors, cleaning electronic contacts and leads, and cleaning ceramic insulators and components. Whether cleaning through-hole or surface mount boards, Branson EC does the job effectively and economically.

## APPLICATION PROCEDURES

Branson EC solution is to be slowly mixed with warm water to a concentration of 2-5% by volume. Branson EC Solution can be used in a temperature range from 130°-160°F (55-72°C). Optimum temperature is 140°F.

For optimum cleaning, Branson EC should be operated at recommended temperatures. Cleaning time is dictated by the quantity and nature of the soil and by the type. Operating Branson EC below the recommended concentrations, temperatures, and times will generally result in poor cleaner performance, characterized by cloudiness and water breaks. Operating EC above the recommended concentration, temperature, and time may cause component metal attack or cause the surfactants to separate from the solution causing poor cleaning. It is imperative that the solution "degas" at operating temperature for minimum of 10 minutes prior to

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introducing the parts into the cleaning solution. It is best if ultrasonic energy is applied during this time to enhance degassing. Thorough rinsing is suggested for removal of cleaning solution. As with any process involving water, drying should be considered as the final step.

The selection and use of the proper ultrasonic cleaning equipment and component fixturing will influence the cleaning efficiency and performance of Branson EC.

## CHEMICAL CHARACTERISTICS

| | |
|---|---|
| **Chemical Composition:** | Blend of liquid, non-ionic alkaline surfactants and detergents |
| **Flash Point:** | None |
| **Recommended Dilutent:** | Water |
| **Biodegradable:** | Yes |
| **Phosphate Free:** | Yes |
| **Normal Use Concentration:** | 2-5% by volume |
| **Normal Use Temperature:** | 130-160°F (55-72º C) |
| **pH at Use Rinse Temperature:** | 12.5 |
| **Rinsability:** | Good |

## Effect of Working Solution on Metals

| | |
|---|---|
| **Stainless Steel:** | None |
| **Steel:** | None |
| **Copper:** | None |
| **Brass:** | None |
| **Aluminum:** | Slight Etch |
| **Magnesium:** | None |
| **Zinc:** | None |
| **Tin** | None |

## PRECAUTIONARY CONSIDERATIONS

- BRANSON EC CONCENTRATED SOLUTION CONTAINS ALKALINE DETERGENTS, AND DIRECT CONTACT MAY RESULT IN BURNS OF EYES OR SKIN IRRITATION.
- AVOID PROLONGED SKIN CONTACT.
- WASH THOROUGHLY AFTER HANDLING.
- DO NOT TAKE INTERNALLY.
- IF DIRECT CONTACT OCCURS, FLUSH, REPEATEDLY WITH COOL, CLEAR WATER.
- KEEP OUT OF REACH OF CHILDREN.

## DISPOSAL

Dispose in accordance with all local, state, and federal regulations.

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**INFORMATION: For additional information concerning Branson EC Solution or other Branson concentrated cleaning solutions, contact your local Branson sales office or BRANSONIC® dealer.**