

SM-855

ALPHA[®] SM-440

Aqueous Solvent Cleaner for Stencils & Misprints

DESCRIPTION

ALPHA SM-440 is an aqueous solvent blend specially designed for optimum effectiveness in stencil and misprint cleaning applications removing misprint pastes, rosin flux, no clean flux, RMA flux, oils, and SMT adhesives. **ALPHA SM-440** is easy to use and is applied as received or diluted further with water as desired for optimum cleaning efficiency. A water rinse is optional to remove all traces of soils and cleaner residues from substrate surfaces.

FEATURES & BENEFITS

- **Removes raw misprint pastes/uncured SMT adhesives**
- **Long bath life**
- **Use with spray or ultrasonics**
- **Residue free**
- **No Flash Point**
- **Apply as received or diluted with water**
- **Rinses optional**
- **No sump-side adds needed**
- **No HAP's**
- **EPA SNAP approved**
- **Low use cost**

PHYSICAL PROPERTIES

<u>Appearance:</u>	Clear colorless liquid
<u>Odor:</u>	Mild
<u>Specific Gravity:</u>	0.923
<u>Weight/gallon:</u>	7.78 pounds
<u>Flash Point, °F/°C:</u>	None to boiling
<u>Boiling Point, °F/°C:</u>	219/103
<u>Surface Tension:</u>	36 dynes/cm
<u>pH 100%:</u>	Neutral
<u>Water Solubility:</u>	Miscible
<u>VOC, 100%:</u>	822.3 g/L
<u>VP of VOC Comp:</u>	0.06 mmHg at 20 °C
<u>COD, 0.25%:</u>	5090 ppm
<u>BOD, 0.25%, 5 day:</u>	<80 ppm

GUIDELINES FOR SUCCESSFUL USE

- **ALPHA SM-440** may be used at ambient temperature or heated as desired up to 145°F (63°C).

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- **ALPHA SM-440** may be used with ultrasonics, stencil spray equipment, immersion agitation or hand applications.
- Rinsing may be optional.
- For a mirror finish on your solder bumps, rinse with deionized (DI) or reverse osmosis (RO) water.
- Dry parts with hot or circulating air.
- Concentration, temperature and time should be optimized for the parts and equipment involved.



APPLICATION

<u>Process Type</u>	<u>Concentration Range</u>	<u>Suggested Process Parameters</u>	
		<u>Temperature Range</u>	<u>Rinse/Dry</u>
Spray; Stencil	10-100%	ambient-145°F (63°C)	ALPHA SM-440 or DI/Air
Spray; Batch	10-100%	ambient-145°F (63°C)	ALPHA SM-440 or DI/Air
Immersion, Agitation	10-100%	ambient-145°F (63°C)	ALPHA SM-440 or DI/Air
Immersion, Soak	10-100%	ambient-145°F (63°C)	ALPHA SM-440 or DI/Air
Immersion, Ultrasonics	10-100%	ambient-145°F (63°C)	ALPHA SM-440 or DI/Air
Manual Wipe	10-100%	ambient	Optional

The above conditions are meant to be starting ranges. Process parameters may be increased or decreased as needed depending on the specific parts and soils involved. Your Cookson Electronics Applications Engineer or Sales Representative can assist you in optimizing your process parameters.

COMPATIBILITY

ALPHA SM-440 is multi-metal safe for use on yellow metals, aluminum, ferrous and composites in addition to most precious metals and some plastic, rubber, glass and ceramic substrates. It is safe to use with PVDF, Kalrez®, Teflon and ceramic elastomers and filters, while it is best used in polypropylene or stainless equipment.

APPLICATION NOTES

Rinsing and Drying:

- Use deionized (DI) or reverse osmosis (RO) water to minimize dendritic growth
- Keep rinses fresh, monitoring by conductivity or resistivity. Recycle.
- Inspect nozzles and equipment regularly. Repair and maintain as needed.

Bath Life:

Bath life studies show high loading capacity. This equates to long tank life, low maintenance costs and reduced waste generation and chemical consumption.

Maintenance Methods:

If used as received, **ALPHA SM-440** concentrate is added directly to the sump. There is no need to monitor concentration on a routine and regular basis. The type and quantity of soils introduced into the sump will dictate tank life. If the product is diluted further with water, concentration may be monitored using a refractometer. Estimated concentration is RI reading X2 = % **ALPHA SM-440**.

ENVIRONMENTAL, HEATH AND SAFETY

ALPHA SM-440 is a biodegradable aqueous solution with 822.3 g/L VOC at 100%. It contains no CFC's or HAP's. It is non-flammable and non-corrosive. Refer to the Material Safety Data Sheet for more information.

STORAGE AND HANDLING

All ingredients in this product are TSCA listed. It is a non-flammable, non-corrosive liquid. Packaged in polyethylene containers, **ALPHA SM-440**, with the seal unbroken, has a suggested shelf-life of one year.

AVAILABILITY

ALPHA SM-440 is available in one (1) gallon, five (5) gallon and 55 gallon containers.