# Elga Europe

# LSL-ST-I-EE (Solder Mask Stripper)

PRODUCT DATA SHEET
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## PRODUCT DESCRIPTION

LSL-ST-I-EE is a product specially formulated for stripping solder mask even after the final curing.

The solder mask stripper LSL-ST-I-EE offers the following advantages:

- Allows recoating of solder mask after defective product has been fully cured.
- No attack to the basic material occurs,epoxy resin is unaffected.
- No attack on copper, tin, tin/lead, nickel or gold occurs.
- LSL-ST-I-EE can be used diluted and used as a cleaning product.

## APPLICATION

LSL-ST-I-EE is used for stripping fully cured solder mask and UV cured screen printing inks.

| PHYSICAL PROPERTIES | |
|---|---|
| State | Liquid |
| pH | 12.0 |
| Odour | Odourless easily after ammonia |
| Boiling Point | 120°C |
| Combustibility | Notflammable |
| Self Combustibility | Not self igniting |
| Vapour Pressure | None |
| Density (at 20°C) | 1.25g/cm$^3$ |
| Solubility in water | Completely miscible |

## STRIPPING

The stripping time depends on the type, layer thickness and curing degree of solder mask.

The following tables contain typical stripping time values:

**Manually**

| LayerThickness | Temperature | Stripping Time |
|---|---|---|
| 20µm to 30µm | 40°C to 45°C | 6 hours |
| | 60°C to 70°C | 30 minutes |
| | 70°C to 75°C | 25 minutes |
| | 80°C to 90°C | 9 to 18 minutes |
| | 90°C to 100°C | 5 to 7 minutes |
| More than 30µm | 40°C to 45°C | 8 hours |
| | 60°C to 70°C | 35 minutes |
| | 70°C to 75°C | 27 minutes |
| | 80°C to 90°C | 12 to 20 minutes |
| | 90°C to 100°C | 10 minutes |

**Conveyorized equipment**

| LayerThickness | Temperature | Stripping Time | Pressure |
|---|---|---|---|
| 20µm to 30µm | 60°C to 70°C | 3 to 5 minutes | 18 to 22 bar |
| More than 30µm | 65°C to 80°C | 4 to 6 minutes | 18 to 22 bar |

## BRUSHING/RINSING

The attacked solder resist shall be removed by simultaneously brushing and rinsing the panel.
Polyester brushes (0.3 to 0.4mm diameter) are recommended.

## MAINTENANCE OF THE BATH AND APPLICATION INSTRUCTION

Never exceed the boiling point of the solution: operate below 120°C.

- ✓ Is recommended to filter the solution after processing 20dm$^2$ of panels per litre.
- ✓ Maintain the solution level by regular additions of water.
- ✓ Cover the bath in order to avoid temperature losses.

## MICRO-ETCHING

After manual solder mask stripping of panels, as well for ones temporarily stocked, a micro-etch to remove oxidation will be recommended.
A typical solution should consist of 10ml/l of $H_2SO_4$ and 70g/l of $Na_2S_2O_8$.
Finally the panels must be rinsed and dried properly.

## CONSUMPTION

Depending on soldermask thickness: 1 litre of stripping solution can process an average between 3 and 5$m^2$ PCB.

## CLEANING RESULTS

The stripping results are dependant on the type and degree of cure of the soldermask, as well as its thickness.

## TREATMENT OF THE USED STRIPPED SOLUTION

1. Neutralize with 96% $H_2SO_4$ or with 33% HCl.
2. Binding with [$Ca(OH)_2$] and $FeCl_3$
3. Addflocculant (amine type)
4. Decantresultant liquor
5. Adjust the pH value with NaOH

## PACKAGING

25 litre or 200 litre polyéthylène drums.

## STORAGE

Only store LSL-ST-I-EE in original containers, upright, away from direct sunlight and in a dry area at 10-32°C.
Keep container closed when not in use.

## HANDLING PRECAUTIONS

LSL-ST-I-EE is strongly alkaline and can cause burns to skin and eyes.

Protective clothing such as impervious gloves, apron, boots, and chemical safety goggles should be worn when handling this product.

***READ MATERIAL SAFETY DATA SHEET PRIOR TO HANDLING THIS PRODUCT***

**In case of order please indicate this code:**

| | |
|---|---|
| **LSL-ST-I-EE** | **GC2420** |

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