

Laser® Brilliant Dip

Laser Brilliant Dip is an acidic liquid concentrate designed to accomplish in one step, the removal of the oxide film produced in the laser chemical polish, removal of lead sulfate residue common to leaded brass alloys, and the elimination of redness occasionally found on brass after the conventional sulfuric acid brilliant dip.

Features & Benefits

Non-fuming	Safe to work with
Highly concentrated	Small storage footprint
Mild non-pitting	Eliminates rejects

Operating Conditions

Laser Brilliant Dip is designed to be used at 10% by volume as the brilliant dip after chemical polishing in Laser B or Laser EX. The unique combination of acids and wetting agents will produce a bright lustrous appearance that is more forgiving than conventional brilliant dips.

The Laser Brilliant Dip should be used at 90° to 100°F, but higher or lower temperatures can be used. Do not exceed 140°F.

Tanks should be constructed of stainless steel, Polypropylene, Polyethylene, or other acid resistant materials.

Laser Brilliant Dip concentrations can be maintained by simple periodic additions of concentrate or by a quick titration method which is outlined in the following procedure.

Dropping bottle control procedure for laser brilliant dip

Equipment

- 1 2 mL Dropper Pipet
- 1 150 mL Polyethylene Beaker
- 1 2 oz Dropper bottle of Phenolphthalein Indicator
- 1 4 oz Dropping bottle of 12.0 Normal Sodium Hydroxide

Testing procedure



1. By means of the dropper pipet transfer 2.0 mL of the Laser Brilliant Dip production solution to the 150 mL beaker. Add 5 to 10 mL water.
2. Add 6 to 8 drops of Phenolphthalein Indicator.
3. Add the 12.0 Normal Sodium Hydroxide from the dropping bottles, counting the drops while constantly swirling the solution until a permanent pink to red color develops.

Calculation

$$\text{Laser Brilliant Dip (\% by volume)} = \text{number of drops of 12.0N Sodium Hydroxide} \times 1.25$$

Quality control procedure for laser brilliant dip bath (burette)

Equipment

50 mL Burette

Burette Clamp and Stand

10 mL Pipet

250 mL Erlenmeyer Flask

Phenolphthalein Indicator Solution

1.0 N Sodium Hydroxide Solution

Procedure

1. Pipet 10 mL of cooled bath sample into a 250 mL flask.
2. Add about 75 mL water.
3. Add 5 drops Phenolphthalein indicator.
4. Titrate with 1.0 N Sodium Hydroxide until solution color turns pink.

Calculation

$$\% \text{ Laser Brilliant Dip} = \text{mL titrant} \times 0.60$$



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