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A2LA Accredited ISO/IEC 17025:2005 Certificate # 2558.01

DIEGLOW 10 BRIGHT DIP FOR ZINC DIE CASTINGS

ACCU-LABS Dieglow 10 is a ready to use acid bright dip for zinc base die castings. **Dieglow 10** is used to improve and reduce the cost of pretreatment for electroplating, chromating, phosphating and blackening. This process levels, polishes, and activates the surface of the die casting; it also removes burrs and superficial flaws thereby producing a smooth, bright lustrous finish that in many instances rivals the appearance of a buffed casting.

One of the major benefits of this chemical polish is that it treats the entire surface of the zinc die casting uniformly. Recesses and back sides are polished and activated.

Dieglow 10 consists of a liquid acidic, chromate-free, chemical deburring and polishing agent that efficiently produces a smooth and bright finish.

The extremely efficient cleansing, polishing, deoxidizing and conditioning action of **Dieglow 10** provides an exceptionally clean, active, and receptive surface for plating or other processing. In many instances, chromating, phosphating, and blackening will be more uniform and durable.

Applications:

- As a complete prior-to plate process
- As a deburring and leveling process prior to conversion coating
- As a process for desmutting and refinishing stripped electroplated zinc die casting
- As a chemical bright dip

Benefits:

- Provides more receptive surface for plating, chromating and other processing; resulting in higher quality work, fewer rejects, reduced handling and labor.
- Improves covering power (throw) of electrodeposits; resulting in higher quality finishes in less dwell time with brighter recesses.
- Reduces rejects from blisters, especially on unbuffed areas.
- Removes smut and reconditions castings after stripping defective electrodeposits; reducing costs to reclaim rejects.
- Eliminates or reduces buffing requirements in many instances.
- Restores surface on old and/or corroded parts; improved appearance.

When used prior to plating, **Dieglow 10** is followed by **ACCU-LABS Diecon 8** Alkaline Die Cast Conditioner that neutralizes any acid that remains in the pores and recesses after rinsing, as well as removes any smut that may be formed on copper bearing zinc alloys (Zamak No.5). This combination produces a casting extremely well prepared for plating.

The alkaline treatment of zinc die castings prior to the copper strike is a novel but logical departure from common practice. In the past, platers have given zinc castings an acid dip before the copper strike, however, adhesion, coverage, and improved corrosion resistance is obtained on castings that possess an alkaline film prior to the cyanide copper strike.

OPERATING GUIDELINES

Concentration:	Dieglow 10 is used as received full strength.
Temperature:	70-110°F (21-43C) (not to exceed 110°F (43C)) Cooling is required.
Equipment, Tanks:	Polyethylene, polypropylene or rigid PVC
Plating Cylinders and Baskets, Heating and Cooling Coils	Lucite, polyethylene, polypropylene or PVC. Teflon heat exchangers may be used for heating and cooling. Jacketed tanks may also be used.
NOTE: Any metal that will be in contact with Dieglow 10 should first be tested to determine if it will be attacked.	
Racks:	Conventional plastisol-coated racks with phosphor bronze or stainless steel tips give good service life. Periodic examination is recommended to determine their long-term tolerance.
Agitation:	Mild work or solution agitation recommended.
Ventilation:	Required, 100 cfm per square foot of solution surface.

OPERATING SUGGESTIONS

Parts to be polished should be free from grease, buffing compound, and die parting compound or they will not polish uniformly. Use an ACCU-LABS heavy duty cleaner to remove these soils before treating with Dieglow 10.

TYPICAL CYCLE:

1. Soak clean, if necessary
2. Cold water rinse
3. **Dieglow 10**, 10 seconds to 3 minutes, depending upon the surface finish of the die casting. (approximately .001" [25 microns] is removed per minute at 90° (32°C))
4. Rinse
5. Rinse-Dual rinsing recommended to prevent acid drag-in
6. **Diecon 8 Conditioner**, 8 oz/gal (60 g/L), 70°F. (21°C), 15 to 30 seconds, with slight agitation
7. Rinse
8. Rinse
9. Plate

For best results, transfer time from the polish to the first cold water rinse should be kept to a minimum (30 seconds or less) because **Dieglow 10** continues to react with the metal during transfer. Since this reaction varies with the alloys used, it is suggested that cycles be set up on the basis of laboratory or plant trials. Zinc alloys containing copper are more sensitive to transfer time than copper-free alloys. **Diecon 8 Conditioner** is recommended to remove the residual smut after polishing.

SOLUTION LIFE:

When the metal removal action becomes too slow or parts develop excessive smut, discard the solution. A gallon of **Dieglow 10** will typically brighten approximately 120 square feet of work.

SAFETY & WARNING:

Read and review the Material Safety Data Sheets for the appropriate health and safety warnings before use.

Dieglow 10 is a strong oxidizing acid and will cause severe burns to eyes, skin and mucous membranes. Always wear eye protection and personal protective gear when handling or working with this product. Read MSDS prior to use.

STORAGE:

Dieglow 10 will freeze at 20°F. Store above 25°F. If frozen or crystallized, thaw and stir at 68° to dissolve solids.

NON-WARRANTY

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