



Better Chemistry. **Better Business.**

Enerox™ Burnishing Compound ZBA-10

Product Code: 2103065
Revised Date: 01/30/2009

Enerox™ Burnishing Compound ZBA-10

DESCRIPTION

Enerox™ Burnishing Compound ZBA-10 is a mildly acidic, concentrated liquid burnishing compound. It can be used with most standard mass finishing equipment, to process brass, zinc, and aluminum. **Enerox™ Burnishing Compound ZBA-10** is suited to a wide variety of parts.

FEATURES AND BENEFITS

- Liquid concentrate
- Mildly acidic pH 4.0 to 4.5
- Controlled foam for cushioning
- Used on multiple metal substrates
- Produces tarnish resistant finish
- High degree of lubricity
- High detergency
- Can be use in vibratory or tumble equipment
- Can be used with stainless steel, ceramic, and porcelain medias

TYPICAL APPLICATIONS

- Burnishing small parts such as grommets and eyelets
- Tumble cleaning of small parts
- Light tarnish and oxide removal in part on part tumbling
- Light tarnish and oxide removal in vibratory mills
- Edge radius generation
- Light de-burring



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RECOMMENDED APPLICATION VIBRATORY BOWLS & TUBS HORIZONTAL & OBLIQUE TUMBLING BARRELS

	Range	Optimum
Concentration	0.5-2.5%v/v	1.5% v/v
Temperature	Ambient	Ambient
Media (optional)	Ceramic, plastic, or stainless steel	As required
Ratio of media to parts	10:1 to 20:1	As required
Time	30 minutes – 2 hours	As required

Note: Each specific mass finishing application has its own unique operating parameters and conditions. Optimum cycle can be development is accomplished by evaluating the combined effect of media (if required), concentration, time, and mechanical action of the mass finishing equipment being used.

EQUIPMENT

Any mass finishing equipment, suitable to the process, may be used. Regular maintenance procedure should include lubricating as per manufacturer's recommendations and periodic confirmation of correct rotational or vibratory speed.

RECOMMENDED PROCESS CYCLE HORIZONTAL & OBLIQUE BARRELS

1. Optional Soak Clean: To remove heavy oil and grease buildup. A soak cleaner, on recommendation by the Hubbard Hall Inc. sales or service representative may be used. Parts can be pre-cleaned in a separate heated soak cleaning tume or, tumble cleaned in the barrel itself, combining sufficient warm water and the cleaner.
2. *Cold Water Rinse
3. Transfer parts to cleaned mass finishing barrel. Add media if required.
4. Add sufficient water to slightly below the surface of parts and optional media. The optimum amount of water and media are determined by trial evaluation.



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5. Add the required amount of **Enerox™ Burnishing Compound ZBA-10**.
 6. If an oblique barrel is used, start the process run.
 7. If a horizontal barrel is used, place the sealing gasket over the door, affix the lid, and tighten it. Rotate 1 revolution. Check for leaks and adjust seal as required.
 8. Process for the required time.
 9. Oblique barrel: When the run is completed, tilt the barrel to drain the load. Briefly rinse the parts.
 10. Horizontal barrel: When the run is completed stop the barrel. Slowly and carefully open the ventilation valve, to bleed any pressure that may have built up during the process run. Only after this has been done can the barrel be safely opened. Replace the gasket with a screen. Replace the lid, and rotate to drain the solution. Briefly rinse the parts.
 11. The processed parts can be prepared for additional mass finishing, such as burnishing, using the same equipment, or transferred to the next appropriate finishing step.
- * It may necessary to remove scale or burs before burnishing. Your Hubbard Hall Inc. sales representative or the Technical Center will be glad to recommend an effective processing cycle for the particular finishing requirement.

RECOMMENDED PROCESS CYCLE VIBRATORY BOWL & TUB

1. Optional Soak Clean: To remove heavy oil and grease buildup. A soak cleaner, on recommendation by the Hubbard Hall Inc. sales or service representative may be used. Parts should be pre-cleaned in a separate soak cleaner tank
 2. *Cold Water Rinse
 3. Lubricate the media by adding water and **Enerox™ Burnishing Compound ZBA-10**.
- Run the vibratory bowl or tub for a short time. This procedure will also prevent the load from seizing or congealing.
4. Add parts to the previously conditioned vibratory equipment.
 5. Process for required time. Add water and **Enerox™ Burnishing Compound ZBA-10** as needed during the cycle.



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6. Rinse the load.

7. Remove and transfer to next finishing operation. Or, prepare for additional mass finishing, such as burnishing, using the same equipment.

* It may be necessary to remove burs or scale before burnishing. Your Hubbard Hall Inc. sales representative or the Technical Center will be glad to recommend effective processing for the particular finishing requirement.

PRODUCT CONSUMPTION

Enerox™ Burnishing Compound ZBA-10 is best utilized as an addition of fresh, concentrated product for each process run of parts. This insures optimum, active material to work on the metal surface. For extended process cycles, replenishment additions of **Enerox™ Burnishing Compound ZBA-10** will maintain the desired levels of components for optimum burnishing effect. As indicated in the Recommended Application section, trial evaluations are suggested before the optimum concentration of **Enerox™ Burnishing Compound ZBA-10** is established.

PROCESS SUGGESTIONS

In horizontal and oblique barrels, the slide zone is very critical to obtain the most efficient action on parts. Therefore, ratio of parts to media and water level will influence the effect of **Enerox™ Burnishing Compound ZBA-10**. By comparison, the mechanical action in horizontal barrels tends to shorten process time versus the oblique barrel. For either equipment, the rotation speed can be adjusted to provide the best tumbling suited to the desired cycle time.

Round and tub vibratory bowls are readily compatible with **Enerox™ Burnishing Compound ZBA-10**. The media and parts are in constant motion, typically providing shorter cycle times versus barrel equipment.

The size and shape of media is critical toward action on the metal surface, and to prevent lodging. New media should be conditioned for the specified break in to remove sharp edges. Older media that becomes glazed and rounded may require replacement.

In vibratory systems, a diluted working solution of **Enerox™ Burnishing Compound ZBA-10** can be prepared, and metered in continuously at a flow rate of approximately 1 gal of working solution/hour/cu ft of equipment volume. Low concentrations of burnishing compound contribute to scratching of the surface, resulting in a mottled or hazy finish after plating. High concentrations of burnishing compound result in low luster and higher than desired RMS values.



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PHYSICAL CHARACTERISTICS

Appearance	Straw colored clear liquid
Odor	Slight
Foaming Tendency	Moderate in cold water at suggested use
pH of working solution	4.0-4.5
Solubility	Complete

PRODUCT PROFILE

Mineral Acids	No
Phosphate	No
Oils	No
Soap	No
Chelating agents	Yes (Citric Acid)

WASTE TREATMENT & DISPOSAL

Enerox™ Burnishing Compound ZBA-10 and its working solutions are mildly acidic. They may be neutralized with dilute caustic or lime slurry to meet local POTW or municipal effluent discharge requirements. Sludge and oils should be separated out before discharge. Spent Enerox™ Burnishing Compound ZBA-10 solutions may contain dissolved metals from the mass finishing process. Therefore, additional treatment of the solution may be required to meet discharge requirements.

SAFETY INFORMATION

Please read the Enerox™ Burnishing Compound ZBA-10 Material Safety Data Sheet.

WARRANTY

THE QUALITY OF THIS PRODUCT IS GUARANTEED ON SHIPMENT FROM OUR PLANT. IF THE USE RECOMMENDATIONS ARE FOLLOWED, DESIRED RESULTS WILL BE OBTAINED. SINCE THE USE OF OUR PRODUCTS IS BEYOND OUR CONTROL, NO GUARANTEE EXPRESSED OR IMPLIED IS MADE AS TO THE EFFECTS OF SUCH USE, OR THE RESULTS TO BE OBTAINED.