



Product Bulletin

Better Chemistry. **Better Business.**

Aquamill™ XLS

Product Code: 2101002
Revised Date: 02/15/2006

Aquamill™ XLS

Aquamill™ XLS is a liquid accelerated mass finishing compound for ferrous alloys.

Aquamill™ XLS is normally used in vibratory finishing mills although it can be used in oblique finishing barrels as well. When used in vibratory mills we recommend the use of ceramic long-life or ceramic medium cut medias. Media shape and size will be determined by part configuration.

Aquamill™ XLS may be used in flow through and closed bowl vibratory processes.

OPERATING PARAMETERS:

Concentration: Full strength

Flow Rate: 1 gallon per hour for each 24 ft² of surface area of steel.

Time: 2-1/2 - 4-1/2 hours depending on starting surface finish.

MEDIA:

- A. 5, 10 or 20 Bond Media will produce a reasonably bright finish after burnish without too much excess work on the part's edges. It is competitive to High Density Media when used correctly.
- B. Media must be selected to prevent lodging and be large enough to move the parts.
- C. Media can be various shapes and sizes. They are chosen based on their ability to reach critical areas; usually areas that are shielded present the biggest problem.
Angle Cut Cylinders, Triangles, Cones, Tristars.
- D. Media's are often mixed in size and shape to reach all critical areas.

EQUIPMENT:

1. Flat bottom bowl lined with chemically resistant material including the drain.
2. The bowl is generally set up with a 3 mm - 4 mm amplitude at a 60-70 degree lead angle. This is usually done with the minimum weights required to roll the media and parts.
3. The drain should be fitted with a valve if batch processing is the method chosen vs. flow through in which case the drain is left open during the entire process.



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4. Metering pumps are required particularly when a flow through process is chosen.
5. Burnishing setup is required.

GENERAL:

Rule 1 - Generally 1 gallon per hour per 25 sq. ft. of work in a 3-4 cubic foot bowl.

Rule 2 - Chemistry is depleted when the wipeable black film is no longer present or the liquid becomes too thick for the bowl to move the parts.

Rule 3 - Additions of water can be made if the bowl runs very hot and evaporation becomes a problem, however, the volume of water (metered into bowl) should not exceed 250 cc. per cubic foot per hour.

Rule 4 - The best surface finish (non etched) is achieved by allowing the active chemistry to be consumed before burnishing.

TYPICAL CYCLE - OPEN BOWL

1. Cut using **Aquamill™ XLS** 2-1/2 - 4-1/2 hours.
2. Burnish using **Aquamill™ ST1** at 5% - 10% by volume with a flow rate of 1-2 gallons per cubic foot per hour. One hour.
3. Unload

CLOSED BOWL

1. Cut **Aquamill™ XLS** 0.3 - 0.5 gallons per cubic foot drained and recharge every 2 hours.
2. Open drain
3. Burnish **Aquamill™ ST1** as above.
4. Unload



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Your Hubbard-Hall technical service representative is available to assist with process development.

It is advantageous for our technical service laboratory to process parts to fine-tune the process to your particular needs prior to field trials.

Aquamill™ XLS should be capable of removing 80 grit grind lines in 2-1/2 to 3 hours.

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.