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.

Features & Benefits

Liquid accelerated mass finishing for ferrous alloys	Can be used in vibratory finishing mills and oblique barrels.

Operating Conditions

Concentration	Full strength
Flow rate	1 Gal/hr for each 24 ft^2 of surface area of steel
Time	2.5 – 4.5 hours depending on starting surface finish

<u>Media</u>

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, Tri-Star's.

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 to 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.

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 ft^2 of work in a 3 to 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 mL 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 2.5 – 4.5 hours.

2. Burnish using Aquamill ST1 at 5% - 10% by volume with a flow rate of 1 to 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.

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 needs prior to field trials.

Aquamill XLS should be capable of removing 80 grit grind lines in 2.5 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.

Our People. Your Problem Solvers.

For more information on this process,
please call us at 203.756.5521 or email: techservice@hubbardhall.com

Hubbard-Hall holds certifications for **ISO 9001:2015**, Responsible Distribution, as accredited by the **ACD** (Alliance for Chemical Distributors) and as a **Women-Owned Small Business**, as well as maintaining an association with **Omni-Chem**[136].