



630 Oakmont Lane ♦ Westmont, IL 60559 ♦ 1-800-323-6863 ♦ ha-international.com

## Mixing Procedures

### Alcohol-Based Paste Coatings

Unless otherwise indicated, the following procedures are based on the preparation of coating in a 55 gallon open head drum. When mixing in smaller or larger tanks, the procedures are still valid, except for references to specific amounts of coating, specific measurements, or specific distances, etc. For assistance in preparing coating in containers other than a 55 gallon drum, contact your HA International representative.

These pastes contain alcohol and are flammable solids. Never mix, use or store these pastes or the alcohol reducer in an area where there is an open flame, sparks, or where molten metal is being poured.

#### **A. Starting with an Empty 55 gallon Open Head Drum**

**Step 1:** Make sure that drum is properly grounded and that a non-sparking spigot is used. Calculate approximately how many gallons of alcohol are required for 45 gallons of coating at the working Baume' and viscosity.

Unless otherwise advised by your HA International representative, only use 99% isopropyl alcohol for dilution of alcohol-based coatings. Starting with a clean, empty drum, fill drum with approximately one-half of the calculated amount of alcohol required for dilution. If this amount of alcohol does not cover mixing blade, add additional alcohol until blade is covered.

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**Step 2:** Turn mixer to moderate speed. Add paste until volume in drum is approximately 2 to 2 ½ times the volume of the starting alcohol. As the mixture thickens, increase mixing speed. Mix at highest possible speed without forming a major vortex. A slight vortex is acceptable.

**Step 3:** If mixture becomes too thick for mixer, add small amounts of alcohol until mixing motion is regained.

**Step 4:** Mix until all paste is dispersed. Make sure there is no material on bottom of drum on which the mixer is mounted. The area between the side of the drum on which the mixer is mounted and the mixing blade is highly prone to a build-up of undispersed material. If after 15 to 30 minutes of mixing, this area still contains undispersed material, change position of mixer (if it is portable) to other side of drum. Continue mixing 15 to 30 minutes.

If mixer is not portable, a garden hoe or other tool can be used to break up the undispersed material.

**Step 5:** If necessary, add additional paste or alcohol to maintain a heavy slurry during this stage of coating preparation.

**Step 6:** Mix approximately 30 minutes or until slurry is homogeneous and free of lumps and undispersed material.

**Step 7:** Reduce mixer speed, gradually add approximately 90% of the remaining amount of calculated dilution alcohol. Adjust mixer speed until only a slight vortex is formed, then

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gradually reduce speed until vortex just disappears. Mix 15 to 30 minutes. Check Baume' and viscosity.

**Step 8:** Gradually add small amounts of alcohol. At this stage of coating preparation, add alcohol in ½ to 1 gallon increments. Mix 15 to 30 minutes and recheck Baume' and viscosity.

**Step 9:** Repeat Step 8 until coating is within desired Baume' and viscosity range.

**Step 10:** When coating properties are within desired range, mix an additional 15 minutes. Recheck Baume' and viscosity.

**Step 11:** When desired Baume' and viscosity range is definitely established, mixing intensity should be reduced to a gentle roll and coating is ready to be used.

**Step 12:** When coating is ready to be used, HA International recommends that the time, Baume', viscosity, coating density, and coating temperature be determined and the data be recorded.

**Step 13:** The Baume', viscosity, coating density, and coating temperature should be checked at least once and preferably twice per shift. Changes in these properties will indicate a potential problem before it becomes serious and results in scrapped castings.

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