

CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2005
DateRun: 09/22/2005
Experimenters: Jason Marshall
ClientType: Metal Finishing
ProjectNumber: Project #1
Substrates: Brass
PartType: Part
Contaminants: Buffing/Polishing Compounds
Cleaning Methods: Ultrasonics
Analytical Methods: Photography, Visual

Purpose: To evaluate aqueous products on supplied parts using ultrasonic cleaning.

Experimental Procedure: Three cleaners were selected after several trials to test chemistries on the buffing compounds. The previous trials were done using heated and room temperature immersion cleaning.

The three cleaners were used at 5% diluted with DI water and heated to 130 F 600 ml beakers. One part was used for each cleaner. The parts were supplied soiled by the client and included smooth rectangular parts. The parts were soiled with buffing compound from the vendor and pictures were taken of each lot before and after cleaning.

Each cleaner was suspended in a Crest Ultrasonic 40 kHz tank and degassed for 5 minutes. The parts were suspended from wire into the beaker and cleaned for 5 minutes. The parts were cleaned for five minutes followed by a 15 second rinse in tap water heated to 120 F and then dried with air blow off for 30 seconds at room temperature. After the first 5 minute cycle, observations were made and recorded. The parts were then cleaned for another 5 minutes.

Results: The MC 132 was the most effective cleaner at the 5 minute mark. After 10 minutes, the Texolite 1740 XL cleaned the parts nearly as well as the MC 132. The Formula 815 GD did not remove all of the buffing compound residue after 10 minutes. Observations and rankings are listed in the table below.

| Cleaner | Observations | Rank |
|------------------|----------------------------------------------|------|
| Formula 815 GD | Not clean after 5 minutes | 3 |
| | Some buffing compound remaining after 10 min | |
| MC 132 | Very clean at 5 minutes | 1 |
| | Clean at 10 minutes | |
| Texolite 1740 XL | Not clean after 5 minutes | 2 |
| | Clean at 10 minutes | |

Summary:

| Substrates: | Brass | | | | |
|--------------------------------|-----------------------------|--------|-------------|-------------------------------------|---------------|
| Contaminants: | Buffing/Polishing Compounds | | | | |
| Company Name: | Product Name: | Conc.: | Efficiency: | Effective: | Observations: |
| Brulin Corporation | Formula 815 GD | 5 | | <input type="checkbox"/> | |
| Matchless Metal Polish Company | MC 132 | 5 | | <input checked="" type="checkbox"/> | |
| Texo Corporation | Texolite 1734 XL | 5 | | <input checked="" type="checkbox"/> | |

Conclusion: Two products were effective at removing the buffing compound after 10 minutes of cleaning. One of the two, MC 132, worked very well after the initial 5 minutes of cleaning.