

#### RENOCLEAN 9009

Water-miscible General Purpose Low Foam Spray Cleaner

## **Overview**

- 1. **WATER QUALITY:** Product was tested up to 1000 ppm total hardness and shows good stability in 1000 ppm hard water.
- **2. FOAM CONTROL:** Product exhibits good foaming control at room temperature under severe agitation.
- ALUMINUM STAIN CONTROL: Product slightly stained all tested aluminum alloys and is compatible with all tested aluminum alloys in normal use conditions.
- **4. YELLOW METAL STAIN CONTROL:** Product is compatible with copper and alloys.
- **5. CORROSION CONTROL:** Product provides good corrosion protection for steel.
- **6. WASHING ABILITY:** Product provides good washing ability at room temperature.

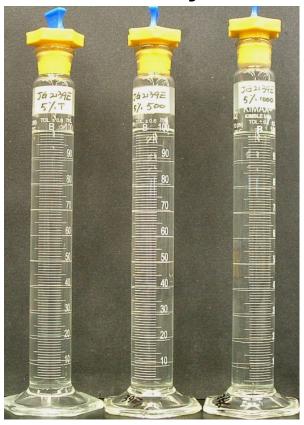
Rev. 09/2011



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## **Mix Stability Test**



120 ppm

500 ppm

1000 ppm

**TEST METHOD:** Product is mixed at 5% in city, 500 ppm, & 1000 ppm water and left to stand 24 hrs. Product gives good mix stability in 1000 ppm hard water.

**RESULT:** Product is stable in 1000 ppm hard water.



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# 30% foam Blender Foam Test(RT) 5% foam

**TEST METHOD:** 300 mL of product is mixed at 5% in Chicago tap water (CTW ~120 ppm), then blended for 1 minute at high speed. Time "0 seconds" is immediately after blending stops. Time "120 seconds" is 2 minutes after blending stops.

**RESULT:** Product exhibits good foaming control at room temperature under severe agitation.

0 seconds

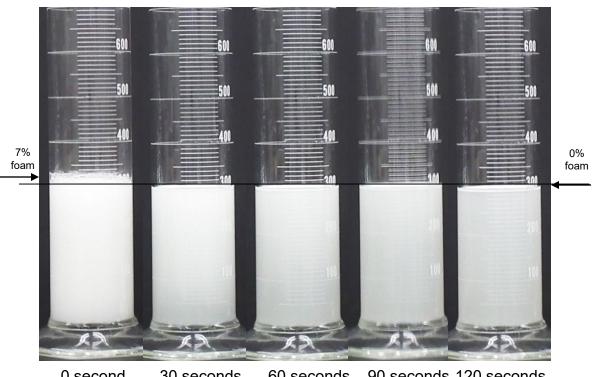
120 seconds



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## **Blender Foam Test (120 F)**



0 second 30 seconds 60 seconds 90 seconds 120 seconds

**TEST METHOD:** 300 mL of product is mixed at 5% in Chicago tap water (CTW ~120 ppm), then blended for 1 minute at high speed. Time "0 seconds" is immediately after blending stops. Time "120 seconds" is 2 minutes after blending stops.

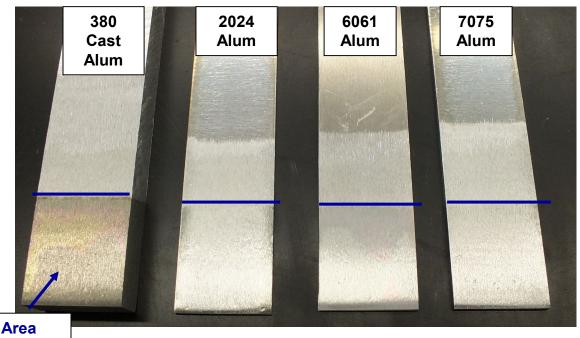
**RESULT:** Product exhibits very good foam control under severe agitation.



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## Non-Ferrous Stain Testing (Aluminum) 1-25-19



immersed in fluid

**TEST METHOD:** Specimens were mechanically sanded, stored in acetone then immersed in product mixed at 5% in Chicago Tap Water (~120 ppm) for 20 hours.

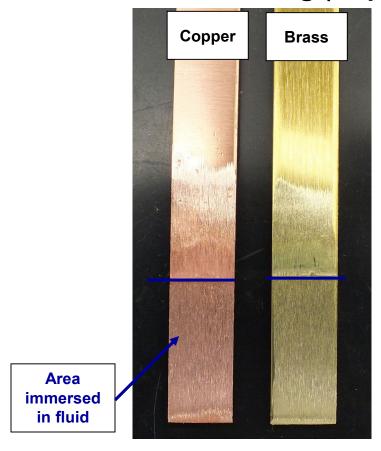
**RESULT:** Product slightly stained all grades of aluminum tested, staining 380 cast aluminum more than others.



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## Non-Ferrous Stain Testing (Copper Alloys) 1-25-19



**TEST METHOD:** Specimens were mechanically sanded, stored in acetone then immersed in product mixed at 5% in Chicago Tap Water (~120 ppm) for 20 hours.

**RESULT:** Product is compatible with copper and its alloys.



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## **Cast Iron Chip Corrosion (CICT)**



Chicago Tap Water (< 25 ppm chloride)

**TEST METHOD:** Product was mixed at indicated concentrations in Chicago Tap Water (<25 ppm chloride). This fluid is then applied to ASTM cast iron chips were placed on filter paper & left for 24 hrs.

**RESULT:** Product shows good corrosion protection on ferrous metals in city water.



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## Tramp Oil Rejection Room Temp







1 min.

3 min.

TEST METHOD: 3% tramp oil is added to 5% CTW mixture of cleaner product. This solution is vigorously mixed in a graduated cylinder for 1 minute. Observations were made at 1, 2, and 3 minutes.

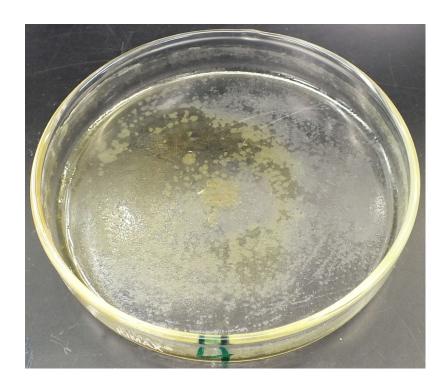
**RESULT:** Product rejects tramp oil.



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## Residue & Re-solubility



Residue after 24 hours in 122°F oven

**TEST METHOD:** 40 mL of a 5% emulsion of product in CTW is placed into a petri dish in an oven at 122°F for 24 hours. The residue appearance after 24 hours is recorded, then 40mL of CTW is placed in the dish and allowed to soak for 30 minutes. The dish is swirled around and the solubility of the residue is recorded.

**RESULT:** Yellow and white frosted hard residue with no tack. The re-solubility of the residue is medium hard: there is still some residue left.