

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2018  
 DateRun: 01/29/2018  
 Experimenters: Kevin Smith, Justin Rainaud  
 ClientType: Cleaner Manufacturer  
 ProjectNumber: Project #14  
 Substrates: Glass/Quartz  
 PartType: Part  
 Contaminants: None  
 Cleaning Methods: Low Pressure Spray  
 Analytical Methods: Timing

Purpose: To evaluate aerosol glass/surface cleaners for vertical adhesion to glass surface.

Experimental Procedure: A large glass window was cleaned using Windex from SC Johnson to ensure uniform clean surface. Once dry each of the test aerosol products were sprayed for 1-2 seconds onto the surface. A timer was started to determine the time the cleaner took to travel 1 foot (30 cm). A second observation was made to see how much movement was achieved for the products for a total of 2 minutes. At the end of 2 minutes the distance traveled by the product was recorded.

For products that need more than 1 minute to travel the 30 cm, time will be recorded as greater than 2 minutes and receive a score of excellent. For products that run down the entire length of the window (4 feet) in less than the 2 minutes, the distance were recorded as greater than 4 feet and will receive a score of poor.

Observations were made using the following:

| Time rating (sec) | Rating    | Distance Rating (foot) | Rating    |
|-------------------|-----------|------------------------|-----------|
| 120               | Excellent | <1                     | Excellent |
| 60                | Good      | 1                      | Good      |
| 30                | Okay      | 2                      | Okay      |
| 15                | Fair      | 3                      | Fair      |
| <15               | Poor      | 4                      | Poor      |

Results: Both products had good to excellent vertical cling as determined by the length of time needed to travel one foot and how far the sprayed product traveled in 2 minutes. The table lists the time and distances for each product.

| Product                      | Time 1ft        | Rating | Distance in 2 min | Rating |
|------------------------------|-----------------|--------|-------------------|--------|
| Foaming Glass Cleaner Clorox | 108 sec         | 2      | 37                | 2      |
|                              | >120 sec        | 1      | 27                | 1      |
|                              | >120 sec        | 1      | 27                | 1      |
|                              | Product Average | 1.3    |                   | 1.3    |
| Foaming Glass Cleaner Windex | 108 sec         | 2      | 45                | 2      |
|                              | 112 sec         | 2      | 37                | 2      |
|                              | 120 sec         | 3      | 30                | 2      |
|                              | Product Average | 2.3    |                   | 2      |

Summary:

|                      |                              |               |                    |                                     |                      |
|----------------------|------------------------------|---------------|--------------------|-------------------------------------|----------------------|
| <b>Substrates:</b>   |                              | Glass/Quartz  |                    |                                     |                      |
| <b>Contaminants:</b> |                              | None          |                    |                                     |                      |
| <b>Company Name:</b> | <b>Product Name:</b>         | <b>Conc.:</b> | <b>Efficiency:</b> | <b>Effective:</b>                   | <b>Observations:</b> |
| Brand Buzz           | Clorox Foaming Glass Cleaner | 100%          | 1.30               | <input checked="" type="checkbox"/> |                      |
| SC Johnson & Son Inc | Windex Foaming Glass Cleaner | 100%          | 2.00               | <input type="checkbox"/>            |                      |

Conclusion: Brand Buzz Clorox Foaming Glass Cleaner was the most effective during glass cling testing.