

## **AquaVue™ WTJ**

W – Silicone Urethane Hybrid Emulsion

T – Roll Coat or Spray

J – Ambient or Low Bake

## **Product Data Sheet**

Silicone Urethane Hybrid Emulsion

## **Product Name**

**AquaVue™** WTJ

## **Manufacturer**

Industrial Control Development, Inc.  
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## **Description**

Two component, low VOC water based room temperature as well as low temperature thermally cured coating.

**AquaVue™** was developed for spray and roll coat applications on glass substrates. It is a water cleanable product.

Available in standard **AquaVue™** colors, with the use of automotive grade pigments and no heavy metals. It has excellent weather, chemical and stain-resistance. In addition, it demonstrates good opacity with recommended application thickness. This product should present no health hazard in industrial applications when proper hygiene practices are followed including proper ventilation.

## **Glass Industry:**

**AquaVue™** is available for roll coater and spray. Conventional roll coater or spray equipment may be used.

## **General Application**

**AquaVue™** is designed to adhere to a variety of glass substrates. The product forms a hard, durable coating and is resistant to cleaning chemicals. Other areas of application are lamination, wall cladding, signage, partitions, pattern art glass, and furnishings. Annealed, heat strengthened, tempered, reflective, or high performance glass is compatible with this product.

## **Application**

### **Surface Preparation**

Surface preparation is required for successful use of **AquaVue™**. A good grade of detergent must

be used so that proper adhesion will be assured. All foreign contamination must be removed from the surface before application of **AquaVue™**. Not doing so can lead to failure of adhesion.

Many articles have been written about proper glass cleaning procedures and methods by the major glass manufacturers. Please follow exactly PPG Industries "Recommended Techniques for Washing Glass". **AquaVue™**, as well as other coating products, designed for variety of glass substrates, requires peak quality control, with reference to surface cleanliness, to perform at their maximum capabilities.

Always clean and inspect glass just prior to the application of **AquaVue™**. Inspect all glass to be coated and protect from airborne dirt and debris. Re-wash as required.

### Minimum Coating Thickness

4 to 6 mils (101.6 to 152 µm)

Some colors may require a double coat to achieve full opacity.

It is the responsibility of the applicator to determine the need for a second coat.

### Application Environment

**AquaVue™** is a water based material with ambient cure properties. Therefore it is recommended that in extreme environments, environmental controls be used during application.

IDEAL CONDITIONS:  
50-70°F (10-21°C)

Once ready to apply coating, it is suggested that the glass be coated within reasonable amount of time to limit amount of drying in equipment.

For unordinary production up to 5% water can be added to help control viscosity. Water should be added prior to start of production run. Color variances potentially can occur if water is added part way through run.

If running various size glass, it is also recommended to coat larger glass sizes followed by the smaller sizes.

### Application Methods

Air Assisted Airless Spray equipment is required for application on larger stock glass pieces. Small pieces of glass can be manual sprayed. Please contact ICD for application equipment needs and procedures.

#### Typical Roll Coat Equipment

- Reverse applications require 40 grooves per inch.
- Color - Intermix colors are available.

### Cure Methods

Coating should be allowed pre-flash before exposure to cure temperatures above 212°F (100°C).

#### Oven Cure

**Convection Oven:** 10-12 minutes @ 300-325°F (149-163°C)

**IR Oven:** 3 to 6 minutes @ 300-325°F (149-163°C)

Allow 24 hours before installation.

## Handling

Coating can be handled immediately after cool down to room temperature. Maximum adhesion of coating will continue to develop and be achieved in 5-7 days.

## Ambient Cure

Room Temperature Cure:  
Coating can be handled lightly within 8-12 hours.

Allow 7 days before installation.

Coating will reach maximum adhesion and physical properties within 21 days.

## Adhesion

**AquaVue™** has outstanding adhesion to architectural glass substrates.

To achieve adhesion and cross linking, the use of additive KV-630 is required.

Use level is one percent (1%) by weight of base material.

See Technical & Application information for proper use of this additive.

## Mixing Instructions:

### Roll Coater

While mixing the **AquaVue™** coating, slowly add 1% KV-630 (by weight of base material). Mix for 15 minutes.

### Pot life

Activated material: Eight (8) hours in a sealed container.

### Spray

Use the same mixing procedure as roll coater.

If needed, water can be used for viscosity control. Up to 10-15% by weight of base material can be used.

Mix additional 5 minutes, prior to application.

## Colors Available:

All primary colors are available. For customer color matching virtually any color can be achieved.

- WTJ-40-115 Primary White
- WTJ-41-008 Primary Black
- WTJ-42-019 Primary Pthalo Green
- WTJ-45-520 Primary Red
- WTJ-45-521 Primary Red Oxide
- WTJ-46-626 Primary Pthalo Blue
- WTJ-47-713 Primary Yellow Oxide
- WTJ-47-714 Primary Yellow
- WTJ-48-004 Primary Orange
- WTJ-49-413 Primary Violet

## Typical Properties

### Physical Properties ..... Liquid

*Color* ..... *Various*  
*Solids* ..... *37-45% depending on color Specific*  
*Gravity*:..... *1.07-1.21 depending on color*  
*pH*: ..... *8-9*

### Cured Properties:

*Maximum physical properties* ..... *21 days*  
*Pencil*: ..... *4-6H*  
*Solvent resistance*: ..... *Plus 200MEK*  
*VOC*: ..... *under 225g/liter*

### Tests:

*QUV*: ..... *10,000 hours*  
*145°F (62.8°C) WATER*: ..... *14 days*  
*Room Temperature water* ..... *30 days plus*  
*Solvent Resistance*:..... *Excellent +200MEK rubs*

## Installation

### Installation Materials

Neutral cure silicones (GE, Dow Corning, Tremco)

Neutral cure silicone sealants show good adhesion on clean surfaces. Surfaces may be cleaned with IPA, allowed to dry and sealant applied. Use supplier recommendations as amount, use only amount of sealant allowed to perform adhesion to the substrate. Substrate must be dry and cleaned for proper adhesion.

Glass must be mechanically supported.

### **Cured Coating Limitations**

**Not** to be used within a spandrel cavity application.

### **Cleaning Precaution**

Harsh/Abrasive cleaning devices such as steel wool and/or other harsh/sharp cleaning tools should never be used. Special care should be taken when cleaning debris from the coated glass with a razor blade.

### **Cleaning Recommendation**

Cleaning can be done with use of a mild cleaning solution such as, an IPA based product or any general household cleaner for glass. Use a lint free rag to wipe off light excess debris.

For the removal of stubborn marks the use of a soft bristle brush with the mild cleaning solution is recommended. Avoid stiff bristle brushes. If more aggressive cleaning methods are needed, test a small area using more aggressive cleaning agents and rinse immediately with clean water.

Please contact ICD Tech Service for additional recommended cleaning solutions.

### **Availability**

**AquaVue™** is marketed throughout the Globe. For a fabricator near you or additional product information, please

contact ICD-High Performance Coatings, @ 1-360-546-2286.

Or visit our web page:  
[www.icdcoatings.com](http://www.icdcoatings.com)