

Product Data Sheet (PDS)

PRODUCT NAME

AquaVue® water-based silicone acrylic hybrid glass coating.

MANUFACTURER

ICD High Performance Coatings + Chemistries
7350 S Union Ridge Parkway
Ridgefield, WA USA 98642
Phone: (360) 546-2286
Fax: (360) 546-2287

DESCRIPTION

"AquaVue®" is the trade name for a two component, water-based silicone acrylic hybrid coating for roll coat and spray applications on glass substrates. Upon evaporation of water, the applied coating forms a hard, durable coating providing opacification in any color to glass related construction materials and is resistant to cleaning chemicals. AquaVue® will cure at room temperature ambiently, or with the use of low temperature ovens. Clean-up of liquid coating is achieved with water. It has excellent weather, chemical and stain resistance. This product should present no health hazards in industrial applications with proper ventilation and hygiene practices.

USE

Architects and designers select any color for opacifying glass for interior wall cladding. It may be used on annealed, heat strengthened or tempered glass with equal efficacy. It is a problem free method for opacifying reflective, high-performance or tint glass. Other interior areas of application are lamination, signage, partitions, pattern art glass, and furnishings.

Adhesion: AquaVue® has outstanding adhesion to architectural glass substrates. ICD has performed rigorous testing involving various substrates. The results have been excellent. 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.

Availability: AquaVue® is marketed throughout the globe. For a fabricator near you or additional product information, please contact ICD High Performance Coatings + Chemistries at 1(360)546-2286 or visit our website at www.icdcoatings.com.

Quality Control: Sample and batch quality control are achieved using computer technology.

Color Availability: There is a wide range of formulated colors. Virtually any color can be achieved, and exact color matching is possible with the use of a computerized spectrophotometer. Custom colors available upon request.

Color Fast: All pigments used in AquaVue® are all rated excellent in color fastness.

TYPICAL PROPERTIES

Maximum physical properties (full cure) of AquaVue® are achieved at three to four days, 70°F (21°C) and 50% relative humidity. The product will attain enough improved properties for shipment with adequate evaporation of water.

Uncured

Color: Various
Percent Solids: 40-50%
Specific Gravity: 1.06-1.20
pH (CTM 0007): 8-10
VOC 135 g/liter

Maximum Physical Properties:

3-4 days; 70°F (21°C)
Color Various
Pencil 4-5H
Solvent Resistance 200+ MEK
VOC 0g/liter

Tests:

QUV 10,000 hours
145°F (62.8°C) Water: 14 days
Room Temperature Water Plus 30 days
Solvent Resistance Excellent +200MEK

Standard Colors:

#ATJ-40-116 Bone White
#ATJ-40-142 High Hide White
#ATJ-40-149 Primary White
#ATJ-42-020 Pale Green
#ATJ-42-021 Pebble Grey
#ATJ-42-022 Olive Grey
#ATJ-43-030 Telegray
#ATJ-44-438 Sea Scallop
#ATJ-45-522 Teaberry
#ATJ-45-523 Purple Rain
#ATJ-45-525 Carmine Red
#ATJ-45-526 Wine Red
#ATJ-45-527 Grape Harvest
#ATJ-46-628 Linum Ice
#ATJ-46-629 Distant Blue
#ATJ-46-630 Capri Blue
#ATJ-47-715 Sand Yellow

Application Methods: AquaVue® can be sprayed or roll coated.

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

Typical Roll Coat equipment. Reverse applications require 40 grooves per inch.

Surface Preparation: Surface preparation is required for successful adhesion of AquaVue®. All foreign contamination must be removed from the surface before application. Please follow PPG's technical manual, "Recommended Techniques for Washing Glass". Inspect glass prior to the application of AquaVue®. Rewash as required.

Minimum Coating Thickness: 4 to 6 mils (101.6 to 152 µm). Some colors may require double coat to achieve full opacity. It is the responsibility of the applicator to determine the need for a second coat.

Application Environment: Ideal conditions are 50-70°F (10-21°C). It is suggested that the glass be coated within one hour (1) to limit the amount of drying in equipment. If running various sizes of glass, it is recommended to coat larger glass sizes followed by smaller sizes.

Cure Methods:

Ambient Cure

- Coating can be handled lightly within 8 hours
- Allow 1-2 days before installation
- Coating will reach maximum adhesion and physical properties within 3-4 days
- Coating should be allowed pre-flash before exposure to cure temperatures above 212°F (100°C)

Low Bake Oven

- Convection Oven: 10-12 minutes @ 300-325°F (149-163°C)
- IR Oven: 3-6 minutes @ 300-325°F (149-163°C)
- Allow 24 hours before installation

Handling: Coating can be handled immediately after cooling down to room temperature. Maximum adhesion of coating will continue to develop and be achieved in 3-4 days.

Mixing Instructions:

Roll Coater

- While mixing the AquaVue® coating, slowly add 1% KV-630 (by weight of base material)
- For example: 1 gram of KV-630 into 100 grams of AquaVue® base material
- Mix for 15 minutes

Spray

- Use the same mixing procedure as roll coater
- Reduce with water, up to 10% by weight of base material
- Mix additional 5 minutes, prior to application
- Water should be added prior to start of production run because color variances potentially can occur if water is added during the production run

Pot Life

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

Installation: Installation materials such as neutral cure silicones (GE Silicones, Dow Corning, Tremco) show good adhesion on clean surfaces. Follow sealant manufacturers recommendation for correct amount for proper 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 for first surface or exterior applications.

Cleaning Recommendation: Cleaning can be done with use of a mild cleaning solution such as, an Isopropyl Alcohol or any general household cleaner for glass. Use a lint free rag to wipe off light excess debris. For the removal of suborn marks, the use of a soft bristle brush with a 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. Contact ICD Technical Services for additional recommended cleaning solutions.

Storage: AquaVue® is a water-based material. The product, unapplied, must not freeze! Storage temperature should be between 32°F (0°C) and 72°F (22°C).

Shelf Life: The liquid shelf life, unmixed, is twelve (12) months from the date of shipment.

PRECAUTIONS

The uncured emulsion and additive can cause eye irritation. Skin and eye contact should be avoided. In case of eye contact, flush eyes with water for at least 15 minutes and obtain medical attention. For skin contact, flush affected areas with water as soon as practical.

COST

Contact ICD for a list of fabricators who apply AquaVue® in your area by phone at 1(360)546-2286 or be email icd@icdcoatings.com

MAINTENANCE

None required.

TECHNICAL SERVICES

ICD has experienced staff available for technical consultation. Contact ICD by phone at 1(360)546-2286 or be email icd@icdcoatings.com