

 Performance Finishes by Van Technologies, Inc.	<b>GL-6800 Exterior Acrylic Topcoat</b> <b>Semi-Transparent &amp; Solid Colors</b>	<b>Technical Data Sheet</b>	
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**1.0 MSDS Information**

A material safety data sheet is readily available to all those having potential contact with the product. The MSDS should be held in file for reference purposes as specified by the OSHA Worker Right to Know Requirements.

**2.0 Scope**

**GL-6800** is a waterborne exterior acrylic topcoat that is low in volatile compounds (VOC's) and ultra-low in hazardous air pollutants (HAP's). The chemistry of the topcoat is based on exterior grade acrylic polymers and the use of UV absorbers to ensure color fastness. The exterior longevity of the **GL-6400/GL-6800** finish system is remarkable with many rustic exterior surfaces (including log homes and facilities) experiencing up to 10 years of quality service\*. Dry time ranges from 30 to 60 minutes depending on temperature and relative humidity. It is recommended to use the **GL-6400** as the sealer for this topcoat. For optimum performance the surface should be sealed with **GL-6400** followed by two coats of **GL-6800**. The **GL-6800** topcoat is intended to be applied by brush or flow coating methods although other methods may be appropriate. The **GL-6800** is available in a clear, transparent maintenance coating, in a variety of semi-transparent and solid colors. Please refer to the available color chart for assistance in color selection.

\*Actual weathering characteristics and properties are highly dependent on a multitude of variables including application methods, surface preparation, and environmental/climate conditions. It is not possible to warrant the surface finished with the GL-6400/GL-6800 system due to the lack of control of such variables. The longevity of the system when variables are effectively controlled and managed is consistent with market/industry best performance as indicated.

**3.0 Material Properties**

The following are target properties, not specifications.

**3.1 Physical Properties**

3.1.1	Non-Volatiles, wt. %:	40.0 – 44.0
3.1.2	pH:	8.0 – 10.0
3.1.3	Density, lb/gal:	9.00 – 9.60
3.1.4	Brookfield Viscosity, cps: (# 3 spindle, 20 rpm, 21° C)	500 - 800
3.1.5	Surface Tension, dynes/cm:	31 - 36
3.1.6	VOC (dependent on color)	
	EPA Method (less water), lb/gal:	1.91 – 2.06
	Actual wt. %:	9.67 – 10.02
	Actual, lb/gal:	0.87 – 0.96
3.1.7	HAP, lb/lb:	0.14 – 0.19

**3.2 Other product information**

3.2.1	Recommended Wet film thickness:	3.0 mil – 6.0 mils
3.2.2	Cleanup:	
	wet coating	Absorb using appropriate media



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dry coating

and use water to remove remainder with absorbent wipe. Dispose of in accordance to national, state and local regulations will be insoluble in water and may be disposed of as solid waste. Use acetone to clean/dissolve dry residues, remove with absorbent wipe. Dispose of in accordance to national, state, and local regulations.

3.2.3 Material supplied "ready to use". In the event reduction is desired, the use of water is recommended. It is strongly suggested to contact Van Technologies for information concerning any corrective, and/or modifying actions.

**4.0 Finish Performance Data (acrylic sealer and acrylic topcoat)**

**Recommended Usage**  
 For all wood surfaces, exterior use, commonly used on exterior wood siding, solid and veneer surfaces.

**Characteristics**  
 Topcoat exhibits flexibility, water resistance, and exceptional adhesion. The system (1 sealer/2 topcoats) exhibits exceptional weatherability. Waterborne, low VOC and zero HAP, non-hazardous and non-flammable.

**Quick Reference Table:**

Characteristics	Ranking
Moisture Resistance	5
Build/Solids	4
Dry Time	4
Yellowing	5
Repairability	3 (requires adequate sanding for mechanical adhesion)
<b>Key:</b>	<b>1 = Poor      2 = Fair      3 = Good      4 = Very Good      5 = Excellent</b>

**5.0 Process requirements:**

- 5.1 To dry a 3.0 to 6.0 mil wet film thickness
  - 5.1.1 Will air dry at ambient temperatures between 50° F and 90° F and relative humidity between 50% and 70% within 30 - 60 min.
  - 5.1.2 Intended to be IR/forced air oven dried using appropriate systems (contact Van Technologies for recommendations). Dry times vary relative to IR system power and may be rapid dried under 30 seconds with suitable IR energy.

5.2 Shipping/Stacking of Parts:  
 Parts may be stacked and packaged immediately after dryness and return to ambient temperature.

**6.0 Supportive Data-Accelerated Weathering Tests**

**Accelerated Weathering Test Results** on pine panels coated appropriately with **GL-6400** sealer and **GL-6800** topcoat compositions designed for exterior rustic wood siding.

**PROCEDURE**

The procedure followed in this testing was as specified by ASTM G53 for a duration of 1000 hours. All tests were independently performed by Q-Lab Weathering Research Services (Q-Lab) of Miami, FL.

**RESULTS-1000 Hour Test Results**

The following table identifies the test results of a 3 coat system (1 seal coat and 2 topcoats) when using each system according to manufacturers instructions.

**GL-6400/GL-6800 System**

Sample ID	General Appearance	Visual Color	Chalking	Checking	Cracking	Blistering	Flaking
1	10	10	10	10	9Bb	10	10
2	10	10	10	10	9Bb	10	10
3	10	10	10	10	9Bb	10	10

**Legend to Table:**

**Inspection and Reporting Standards**

Commonly used standard methods for determining degradation effects.

<u>Effect</u>	<u>Standard</u>
Visual Color	ASTM D1729
Chalking	ASTM D4214
Checking	ASTM D660
Cracking	ASTM D661
Blistering	ASTM D714
Flaking	ASTM D772

**Numerical Scales**

Numerical scales are used to depict the degree of effect being reported.



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<u>No</u>	<u>Quality</u>	<u>Change</u>
10	Excellent	No Effect
8	Very Good	Slight
6	Good	Moderate
4	Fair	Pronounced
2	Poor	Severe
0	Very Poor	Very Severe

The numerical scales are used for a wide variety of defects included in the report such as; general appearance, chalk, dirt, mildew, color, etc. Odd numbers are used when the degree is obviously intermediate.

**Visual Color Change**

Subjective appearance evaluation under standard illumination with 10 to 0 scale

F	Fading	All visual color reports
D	Darkening	will include the amount
BL	Bleaching	and type of color change.
Y	Yellowing	
DC	Discoloration	Ex: 8F = Slight Fading

**Specialized Scales**

For factors which do not fit the typical degree rating scale.

a. Checking/Cracking

Report includes degree, type, and depth of defect noted

<u>No</u>	<u>Effect</u>	<u>Type</u>	<u>Depth</u>
10	None	A Irregular	a Checking
8	Slight	B Line & short parallel	b Cracking
6	Moderate	C Switch	
4	Pronounced	D Crow Foot	
2	Severe	E Mosaic	
0	Very Severe	F Shrinkage	
		G Short Random	
		H Sigmoid	

Example: 6Da Moderate Crow Foot Checking