

**TECHNICAL DATA SHEET**

**8007/8100 RIGID VINYL COMPOUND**

8007 and 8100 are acrylic modified rigid vinyl compounds designed for window profile and siding applications. They possess excellent physical and weather ability characteristics.

**TECHNICAL DATA**

<b>PYHSICAL PROPERTIES</b>	<b>PROCEDURE</b>	<b>TYPICAL VALUES</b>
CELL CLASSIFICATION	ASTM D4216	1-20131-13-0101
SPECIFIC GRAVITY	ASTM D792	1.46 +/- 0.02*
DUROMETER (HARDNESS SHORE D)	ASTM D2240	82 +/- 3
TENSILE STRENGTH	ASTM D638	6400 PSI
TENSILE MODULUS	ASTM D638	380,000 PSI
FLEXURAL STRENGTH	ASTM D790	11,300 PSI
FLEXURAL MODULUS	ASTM D790	410,000 PSI
DROP WEIGHT IMPACT	ASTM D4226 METHOD A METHOD B	1.0 in.lb/mil 2.0 in.lb/mil
NOTCHED IZOD IMPACT	ASTM D256	3.0
HEAT DEFLECTION TEMPERATURE	ASTM D648	163deg F/73 deg. C
COEFFICIENT OF LINEAR EXPANSION	ASTM D696	3.3 –5 in/in deg x 10
FLAMMABILITY	UL94	V-0

\* Specific gravity will vary dependent on color.

# **SURFACE BURNING CHARACTERISTICS OF 8100 RIGID PVC**

ACCREDITATION Standards Council of Canada, Registration #1B

REGISTRATION ISO 9002-1994, registered by QMI, Registration #001109

## SPECIFICATIONS OF ORDER

Determine the Flame Spread and Smoke Developed Classifications based upon a single test conducted in conformance with ASTM E 84, as per your letter dated May 29, 1996.

## SAMPLE IDENTIFICATION

The sample submitted for testing was identified as:  
“Royal 8100 White” rigid PVC extrusion, sample supplied in 2.5” x 96” long x 0.08” thick strips.

## TEST PROCEDURE

The method, designated as ASTM-E 84-94, “Standard Method of Test for Surface Burning Characteristics of Building Materials”, is designed to determine the relative surface burning characteristics of materials under specific test conditions. Results are expressed in terms of flame index (FSI) and smoke developed (SD).

Although the procedure is applicable to materials, products and assemblies used in building construction for development of competitive surface spread of flame data, the test results may not reflect the relative surface burning characteristics of tested materials under all building fire conditions.

## SAMPLE PREPARATION

The sample was conditioned to constant mass at a temperature of 73 degrees F and a relative humidity of 50% prior to testing. During testing, the sample was supported with 2 inch hexagonal wire mesh and ¼ inch diameter steel rod spaced at 2 foot intervals.

## SUMMARY OF TEST PROCEDURE

The tunnel is preheated to 150 degrees F, as measured by the floor-embedded thermocouple located 23.25 ft. downstream of the burner ports, and allowed to cool to 106 degrees F, as measured by the floor-embedded thermocouple located 13 ft. from the burners. At this time the tunnel lid is raised and the test sample is placed along the ledges of the tunnel so as to form a continuous ceiling 24 ft. long, 12 inches above the floor. The lid is then lowered into place.

# **SURFACE BURNING CHARACTERISTICS OF 8100 RIGID PVC**

## SUMMARY OF TEST PROCEDURE (continued)

Upon ignition of the gas burners, the flame-spread distance is observed and recorded every 15 seconds. Flame spread distance versus time is plotted ignoring any flame front recessions. If the area under the curve (A) is less than or equal to 97.5 min ft,  $FSI=0.515A$ ; if greater,  $FSI=4900/(195-A)$ . Smoke developed is determined by comparing the area under the obscuration curve for the test sample to that of inorganic reinforced cement board and red oak, arbitrarily established as 0 and 100, respectively.

## TEST RESULTS

SAMPLE	FSI	SD
“Royal 8100 White” rigid PVC extrusion	24	407

## OBSERVATIONS OF BURNING CHARACTERISTICS

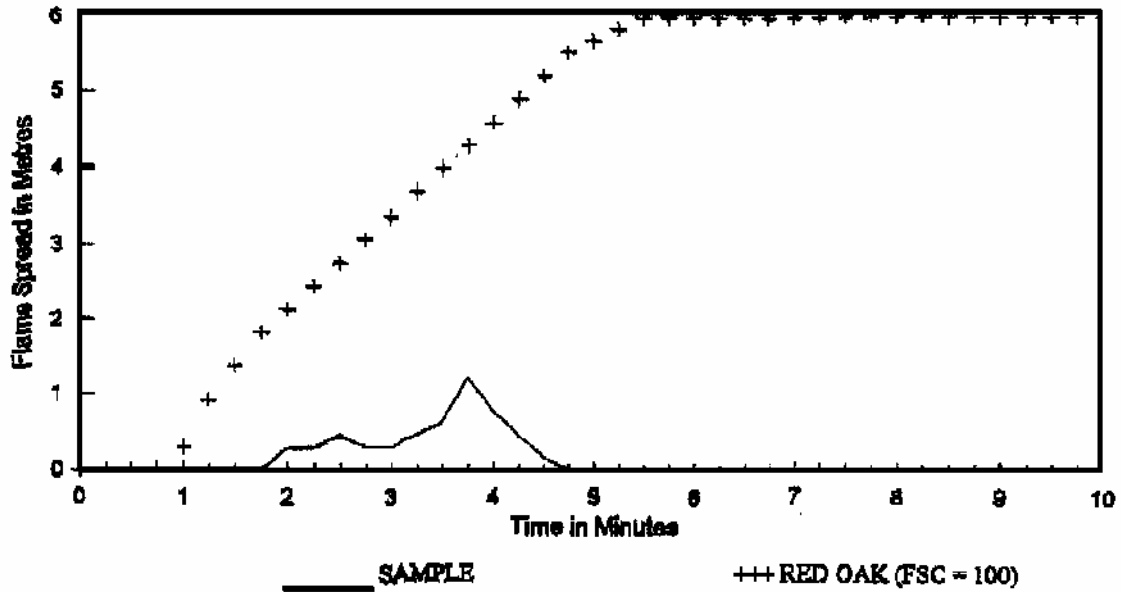
- The sample was observed to begin to melt, ignite and propagate flame after approximately 15 seconds exposure to the test flame.
- The flame front slowly propagated to a maximum distance of 6.0 feet at 4.5 minutes and then receded to the baseline.
- The flame propagation was accompanied by a rapid increase in smoke developed. Maximum amounts of smoke were recorded during the approximate initial 3 minutes of the test. Smoke production then began to decrease as the sample located in the area of test flame impingement was consumed and burning actively subsided (see accompanying charts).

## AUTHORITIES HAVING JURISDICTION USUALLY REFER TO THESE CATEGORIES:

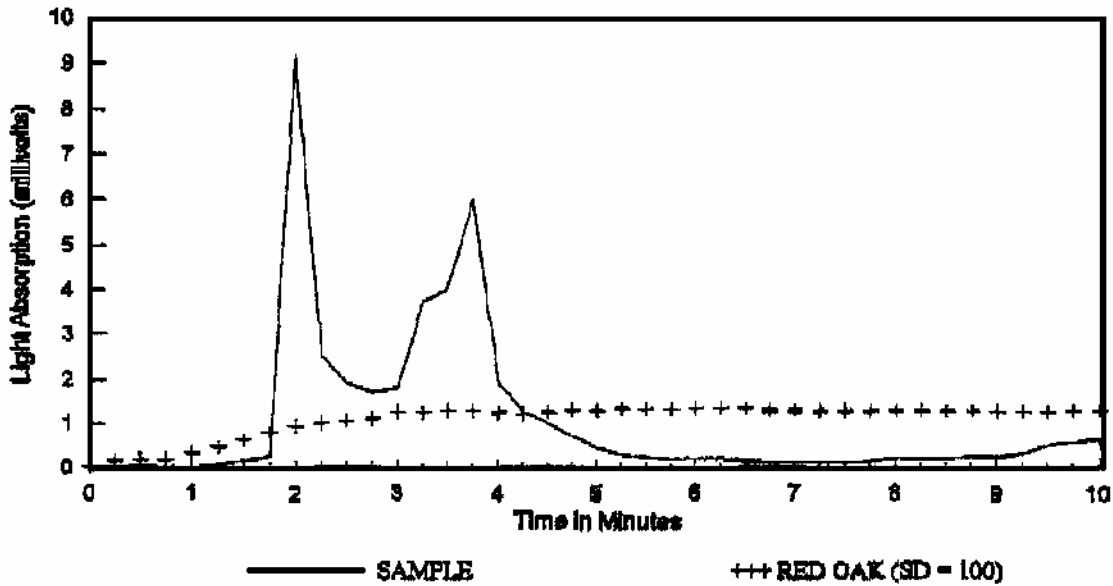
	<u>Flame-Spread Index</u>	<u>Smoke Development</u>
Class 1 or A	0-25	450 Maximum
Class 2 or B	25-75	450 Maximum
Class 3 or C	75-200	450 Maximum

SURFACE BURNING CHARACTERISTICS OF 8100 RIGID PVC

**FLAME SPREAD CLASSIFICATION**  
 "Royal 8100 White" rigid PVC extrusion Test #1



**SMOKE DEVELOPED**  
 "Royal 8100 White" rigid PVC extrusion Test #1



**ESC1**  
16

**SD**  
88

WEATHERING DATA

	1 YEAR	2 YEARS	3 YEARS
IMPACT RETENTION (ARIZONA) (%)	95	86	82
(ONTARIO) (%)	97	93	87
COLOR HOLD (WASHED SAMPLES) (CIELAB DIFFERENCE)			
DE* (ARIZONA)	0.5	1.5	1.2
(ONTARIO)	3.5	0.4	0.5
DL* (ARIZONA)	-0.1	-0.2	-0.2
(ONTARIO)	-3.0	-0.3	-0.2
Da* (ARIZONA)	-0.2	-0.3	-0.3
(ONTARIO)	0.1	0.1	0.0
Db* (ARIZONA)	0.45	1.5	1.1
(ONTARIO)	1.9	-0.3	0.5

DATA WAS BASED ON 8007 WHITE COLOR #138

THE INFORMATION GIVEN HEREIN IS BELIEVED TO BE RELIABLE, BUT NO REPRESENTATIONS, GUARANTEES, WARRANTIES OF ANY KIND ARE MADE TO ITS ACCURACY, SUITABILITY FOR SPECIFIC APPLICATIONS OR FOR THE RESULTS OBTAINED FROM THOSE APPLICATIONS.



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## **What is the “NRP” panel in the StorageGrid system?**

The NRP panel (Non-Fibreglass Reinforced Plastic) in the StorageGrid system is a mineral reinforced Polyethylene plastic skin bonded to a 5.2mm thick Luaun Plywood panel. The Polyethylene plastic skin is made of 100% recycled plastic.

## **Features and Benefits of the NRP Polyethylene skin**

### 100% Waterproof

- No water damage with frequent wash-down
- Will not harbor bacteria
- Non absorbent: no swelling, rotting or water discoloration

### Exclusive Hygienic Properties of the NRP Polyethylene skin

- Clinically proven to resist bacterial growth
- Will not harbor E.coli, black mold or staph

### Chemically Resistant

- Use cleaners of all types without damage
- No yellowing or color change with corrosive environments
- Acid resistant

### Safe

- Class C Flame Spread Rating
- Passes most interior building codes
- UV Resistant
- USDA/CFIA approved
- Fibre-Glass Free

### Durable

- Heavy cracked-ice texture
- Scratches don't show - makes for extended life
- Resists marring – good for high traffic areas

## TECHNICAL DATA SHEET

### STORAGEGRID NRP POLYETHYLENE SKIN

#### TECHNICAL DATA

PHYSICAL PROPERTIES	PROCEDURE	TYPICAL VALUES
FLAME SPREAD	ASTM E-84	105
SMOKE DEVELOPED	ASTM E-84	435
SHEAR STRENGTH	ASTM D-732	2907 PSI
FLEXURAL MODULUS	ASTM D790	90,460 +/- 2840 PSI
COEFFICIENT OF LINEAR THERMAL EXPANSION	ASTM D-696	3.84x10 <sup>-5</sup> in/in/degF
GARDNER IMPACT	ASTM D-3029	231 deg C 22.60 in.lb -20 deg C 5.90 in.lb
WATER ABSORPTION	ASTM D-570	0.055%
HARDNESS	ASTM D-790	51 SHORE D
SPECIFIC GRAVITY	ASTM D-792	0.0916
HEAT DISTORTION TEMP.	ASTM D-649	51.30 deg C
UNNOTCHED IZOD IMPACT	ASTM D-256	7.02 +/-0.21 ft lb/in

# ***FAST-FLOR***

## **Flex Expansion Tile**

Size..... 12" X 12"  
Loading..... 16,000 lbs./Sq. ft.  
Support..... Surface supported by 328 oversized gusseted supports  
Locks..... 32 latch locks; 2 sides w/ 8 male parts; 2 sides w/ 8 female parts  
Weight..... 1.03 lbs.  
Flammability..... Meets U194-HB standards  
Material..... Polypropylene  
Fungus and Mildew Resistant  
Service Range..... -30 to +170°  
Tensile Strength (psi) ASTM D638 5300  
Flexural Modulus (105 psi, 73° F) ASTM D790 1.6  
Tensile Modulus (105 psi) ASTM 638 .82  
Thermal Expansion (10-5 inches/inch/°C) 6.5  
Specific Gravity ASTM D792 .093  
Specific Volume, In3/lb. 30.5

## **Electrical Specifications**

ARC Resistance, SEC. ASTM D495..... 150  
Dielectric Constant (1M Hz)..... 2.5  
Dielectric Strength (Volts/Mil)..... 660

Resistant to: Weak Acids; Weak Alkalies; Strong Alkalies

Colours:

black, white, grey, dark grey, dark blue, green, terracotta, white, almond, medium blue