

# VEROLITE™ BLOCKOUT POLYCARBONATE SHEET

## PRELIMINARY PRODUCT DATASHEET

### DESCRIPTION

VEROLITE™ BLOCKOUT polycarbonate sheet grades are members of the VEROLITE sheet range of high quality, multi-wall polycarbonate glazing sheets extruded from LEXAN resin. The complete range offers remarkable impact strength, light weight, long term weather resistance and, due to the multi-wall construction, outstanding thermal insulation properties and is 2 sides UV protected. VEROLITE BLOCKOUT sheet grades unique formulation blocks 100% of the light for applications that require 0% high light transmission such as light sensitive crops. Because of its colour properties, it reflects the light in the outside and inside of a building, avoiding heat transfer from the outside to the inside and taking maximum advantage of all available light in the inside.

### TYPICAL PROPERTY VALUES ♦

GRADE-COLOR	GAUGE (IN/MM)	Weight (lb/ft <sup>2</sup> ) (kg/m <sup>2</sup> )	SOUND RED. VALUE † (DB)	U-Value‡ (BTU/hr ft <sup>2</sup> °F) (W/m <sup>2</sup> K)	Impact Test¶ Gardner	LT* D65 (%LT)	DST# (%DST)	TST# (%TST)	SHGC #	SC#
<b>VC2UV82R15</b>										
GY8D201	0.315 / 8.0	0.307 / 1.5	18	0.514 / 2.92	>72	0	0.04	12	0.12	0.14
<b>VC2UV103T17</b>										
GY8D201	0.394 / 10.0	0.348 / 1.7	19	0.472 / 2.68	>72	0	0.04	13	0.13	0.15
<b>VC2UV163T27</b>										
GY8D201	0.63 / 16.0	0.553 / 2.7	21	0.399 / 2.27	>72	0	0.04	15	0.15	0.17

♦ These property values have been derived from LEXAN™ resin data for the material used to produce this sheet product.

† Sound reduction value based on SABIC calculated values according DIN 52210-75

‡ U-values based on SABIC calculated values according ISO 10077 (EN673)

¶ Impact test using Gardner Impact method ASTM D4226, D5420, D5628, A2LA Accredited.

\* LT (Light Transmission) and TST (Total Solar Transmission) measurements according ISO 9050 (EN 410) on 600x600 mm samples.

# TST (Total Solar Transmission) divided by 100 equals Solar Heat Gain Coefficient (SHGC) or g-value.

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### SOLAR TRANSMISSION

VEROLITE BLOCKOUT completely blocks light transmission therefore the Direct Solar Transmission is also 0%. As any other plastic material, VEROLITE BLOCKOUT will absorb heat from the sun's rays, a portion of which will dissipate to the interior of the building. It is recommended that this is taken into account when designing the ventilation or HVAC requirements of the building.

### UV RESISTANCE

Besides blocking visible light very well, VEROLITE BLOCKOUT sheet is almost opaque to radiation in the UV and far infra-red region. This useful shielding property can prevent discoloration of sensitive materials such as fabrics or other organic materials placed under or behind VEROLITE BLOCKOUT sheet glazing in. The complete VEROLITE BLOCKOUT sheet range features a proprietary two sides surface treatment designed to protect the sheet against the degrading effects of ultra-violet radiation in natural sunlight. It has excellent resistance to outdoor weathering.

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## WARRANTY

SABIC offers a Ten (10) Year Limited Written Warranty on VEROLITE BLOCKOUT sheet loss of strength due to weathering.

## THERMAL INSULATION

The multi-wall structure of VEROLITE BLOCKOUT sheet offers significant advantages where thermal insulation is a major consideration. The hollow form provides excellent insulation characteristics with heat losses significantly lower than mono-walls glazing materials.

## FIRE TEST PERFORMANCE

VEROLITE BLOCKOUT sheet has good fire behavior characteristics, more detailed information is available from your local SABIC service Center or authorized distributor.

## SOUND INSULATION

The sound insulation characteristics of a material are largely pre-determined by its stiffness, mass and physical construction. According to DIN 52210-75, the maximum obtainable sound is 22dB.

## IMPACT STRENGTH

VEROLITE BLOCKOUT sheet has outstanding impact performance over a wide temperature range, -40°C to 120°C, and also after prolonged outdoor exposure.

## HAIL RESISTANCE

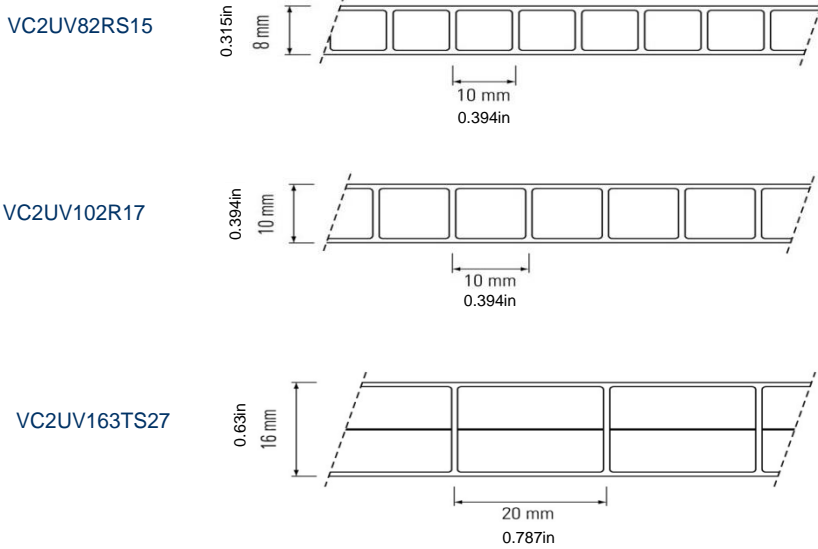
As roofing material VEROLITE BLOCKOUT sheet is subjected to the extremes of weather; like storms, hail, wind, snowfall and ice formation. Under these conditions, the product is virtually unbreakable and is able to accommodate the subsequent temperature change to sunny conditions without breaking or buckling. It should be noted that when glass and acrylic are tested their failure characteristics are typical brittle, while VEROLITE BLOCKOUT sheet shows a ductile deformation one, e.g. small indentations. SABIC offers a Ten Year (10) Limited Written Warranty on VEROLITE BLOCKOUT sheet covering loss of strength or impact due to weathering.

## INNER SURFACE: ANTI-DRIP

In addition to the standard 2UV Co-Extruded grade-color combinations we have other optional sheet configurations available in VEROLITE BLOCKOUT sheet. A unique inside surface treatment was developed to give specific added-value properties to the sheet.

VEROLITE BLOCKOUT Dripgard sheet is suitable for any roof glazing application in which water droplets are unacceptable, such as commercial greenhouses where they could cause crop spoilage. This innovative product has UV protection on the outer surface and a specially developed hydrophilic coating on the inner surface. This coating reduces the formation of condensation droplets by increasing the surface tension of the sheet and decreasing the contact angle. As a consequence, a thin mist of water will form on the inner surface of the sheet, which will not drip and will not affect the excellent light transmission of the material.

## STRUCTURES AND NOMENCLATURES



## TOLERANCES ON DIMENSIONS

GAUGE/WEIGHT	STRUCTURE	WEIGHT	GAUGE	WIDTH	LENGTH	
					< 20FT/6M	> 20FT/6M
0.315in 0.307 lb/ft2 8.0mm 1.5 kg/m2	3RS	+/- 1%	+/-5%	+/-0.5%	+0.472in +12mm	+1.81in +30mm
0.394in 0.348 lb/ft2 10.0mm 1.7 kg/m2	3RS	+/- 1%	+/-5%	+/-0.5%	+0.472in +12mm	+1.81in +30mm
0.63in 0.553 lb/ft2 16.0mm 2.7 kg/m2	3TS	+/- 2%	+/-3%	+/-0.5%	+0.472in +12mm	+1.81in +30mm

## GENERAL GUIDELINES

### STORAGE

VEROLITE BLOCKOUT sheet should be stored and protected against atmospheric influences like sun, rain, etc. Care should be exercised when handling and transporting VEROLITE BLOCKOUT sheet in order to prevent scratches on the panel surface and damage to the panel edges.

### CLEANING

SABIC recommends the following cleaning agent SUMALIGHT D12 from Johnson Diversey Lever (check Technical manual for further details). Small surfaces can be cleaned with lukewarm water, using a soft sponge and a solution of mild soap. Do not use any corrosive materials or chemicals to clean all VEROLITE sheet. Using any other cleaning agents than the recommended one must have the prior approval of SABIC in order to validate the VEROLITE sheet warranty.

### CHEMICAL RESISTANCE

Neoprene, EPT or EPDM rubbers with an approximate Shore Hardness of A65 are recommended. When using glazing compounds it is essential that the sealant system accepts a certain amount of movement to allow for thermal expansion, without loss of adhesion to the frame or sheet. Silicone sealants are generally recommended for use with VEROLITE sheets. It is strongly advised when using sealing to check before compatibility before use.

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## SAWING

VEROLITE sheets can be cut easily and accurately with standard workshop equipment. This includes common circular, hand and hacksaws. Saw dust should be blown out of the channels using clean compressed air. Circular saw blade should be fine-toothed panel blades. When hand or power hacksaws are used, the sheet should be clamped to the worktable to avoid undesirable vibration.

## THERMAL EXPANSION ALLOWANCE

Since VEROLITE sheet has a greater linear thermal expansion coefficient than that of traditional glazing materials, care should be taken to allow for free expansion of the sheet to prevent bowing and internal thermal stress. Thermal expansion allowance must be made for both the length and width of the VEROLITE sheet. In general, thermal expansion of the sheet is approximately 0.036in per linear foot.

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