

VEROLITE™

POLYCARBONATE SHEET

PRODUCT DATASHEET

DESCRIPTION

VEROLITE™ sheet grades are high quality, multi-wall polycarbonate glazing sheets extruded from LEXAN™ resin. The complete range offers remarkable impact strength, high light transmission, light weight, long term weather resistance and, due to the multi-wall construction, outstanding thermal insulation properties and is available with 1 or 2 sides UV protection. VEROLITE sheet grades are available in colours: Clear, Opal White, Bronze, Solar Control IR Green and Metallic.

TYPICAL PROPERTY VALUES◆

GRADE 1UV / 2UV / 1UV1DG COLOR	GAUGE IN/MM	Weight lb/ft ² kg/m ²	SOUND RED. VALUE † (DB)	U-Value‡ BTU/hr ft ² °F W/m ² K	Impact Test¶ Gardner	LT* D65 %LT	DST# %DST	TST# %TST	SHGC #	LSGR#	SC*
VC20613 / VT0613 / VD20613											
Clear	0.236 / 6	0.266 / 1.3	17	0.627 / 3.56	>72	82	76	82	0.82	1.00	0.94
White	0.236 / 6	0.266 / 1.3	17	0.627 / 3.56	>72	20	31	35	0.35	0.57	0.40
Opal	0.236 / 6	0.266 / 1.3	17	0.627 / 3.56	>72	40	49	53	0.53	0.75	0.61
Bronze	0.236 / 6	0.266 / 1.3	17	0.627 / 3.56	>72	52	54	62	0.62	0.84	0.71
IR-Green	0.236 / 6	0.266 / 1.3	17	0.627 / 3.56	>72	66	47	60	0.60	1.10	0.69
Metallic	0.236 / 6	0.266 / 1.3	17	0.627 / 3.56	>72	16	15	34	0.34	0.47	0.39
Softlite	0.236 / 6	0.266 / 1.3	17	0.627 / 3.56	>72	79	73	77	0.77	1.03	0.89
VC20815 / VT2815 / VD20815											
Clear	0.315 / 8	0.307 / 1.5	18	0.574 / 3.26	>72	81	77	82	0.82	0.99	0.94
White	0.315 / 8	0.307 / 1.5	18	0.574 / 3.26	>72	27	33	37	0.37	0.73	0.43
Opal	0.315 / 8	0.307 / 1.5	18	0.574 / 3.26	>72	47	52	55	0.55	0.85	0.63
Bronze	0.315 / 8	0.307 / 1.5	18	0.574 / 3.26	>72	50	43	59	0.59	0.64	0.68
IR-Green	0.315 / 8	0.307 / 1.5	18	0.574 / 3.26	>72	65	47	61	0.61	1.07	0.70
Metallic	0.315 / 8	0.307 / 1.5	18	0.574 / 3.26	>72	17	17	31	0.31	0.35	0.36
Softlite	0.315 / 8	0.307 / 1.5	18	0.574 / 3.26	>72	79	73	77	0.77	1.03	0.89
VC21017 / VT21017 / VD21017											
Clear	0.394 / 10	0.348 / 1.7	19	0.532 / 3.02	>72	81	76	80	0.80	1.01	0.92
White	0.394 / 10	0.348 / 1.7	19	0.532 / 3.02	>72	20	39	43	0.43	0.46	0.50
Opal	0.394 / 10	0.348 / 1.7	19	0.532 / 3.02	>72	40	56	59	0.59	0.68	0.68
Bronze	0.394 / 10	0.348 / 1.7	19	0.532 / 3.02	>72	50	44	55	0.55	0.64	0.63
IR-Green	0.394 / 10	0.348 / 1.7	19	0.532 / 3.02	>72	65	45	60	0.60	1.08	0.69
Metallic	0.394 / 10	0.348 / 1.7	19	0.532 / 3.02	>72	16	15	29	0.29	0.55	0.33
Softlite	0.394 / 10	0.348 / 1.7	19	0.532 / 3.02	>72	78	72	76	0.76	1.03	0.87
VC31627 VT31627 / VD31627											
Clear	0.63 / 16	0.553 / 2.7	21	0.399 / 2.27	>72	74	70	78	0.78	0.95	0.90
White	0.63 / 16	0.553 / 2.7	21	0.399 / 2.27	>72	20	40	45	0.45	0.44	0.52
Opal	0.63 / 16	0.553 / 2.7	21	0.399 / 2.27	>72	40	55	59	0.59	0.68	0.68
Bronze	0.63 / 16	0.553 / 2.7	21	0.399 / 2.27	>72	52	38	53	0.53	0.60	0.61
IR-Green	0.63 / 16	0.553 / 2.7	21	0.399 / 2.27	>72	55	36	52	0.52	1.06	0.60
Metallic	0.63 / 16	0.553 / 2.7	21	0.399 / 2.27	>72	16	15	22	0.22	0.73	0.26
Softlite	0.63 / 16	0.553 / 2.7	21	0.399 / 2.27	>72	72	67	73	0.73	0.99	0.84

◆ 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

* 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.

™ Trademarks of SABIC.

COLOR REFERENCE TABLE

COLOR	COLOR NUMBER
Clear	112
Opal (40%LT)	825074
White (20%LT)	825075
Bronze	5109
IR-Green	GN8B038T
Metallic	GY6A744M
Softlite	SOFTL

DEFINITIONS

SOLAR TRANSMISSION

Transparent grades of VEROLITE™ sheet have excellent light transmission. Although VEROLITE sheet has less solar transmission versus traditional glass, we advise for buildings in hot climates or facing south, VEROLITE sheet in IR version (absorbing infra-red) which will reduce the solar transmission substantially up to 70%.

UV RESISTANCE

Despite transmitting visible light very well, VEROLITE 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 sheet glazing in, for example, a factory warehouse, museum or shopping center. The complete VEROLITE 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.

WARRANTY

SABIC offers a Ten (10) Year Limited Written Warranty on VEROLITE sheet covering discoloration, loss of light transmission and loss of strength due to weathering. For detailed information, please contact your local SABIC Service Center or authorized distributor.

THERMAL INSULATION

The multi-wall structure of VEROLITE 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 sheet has good fire behavior characteristics, with a CC1 and Class A rating according to ASTM D635 and E84 testing respectively. 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 21dB.

IMPACT STRENGTH

VEROLITE sheet has outstanding impact performance over a wide temperature range, -40°F to 248°F, (-40°C to 120°C) and also after prolonged outdoor exposure.

HAIL RESISTANCE

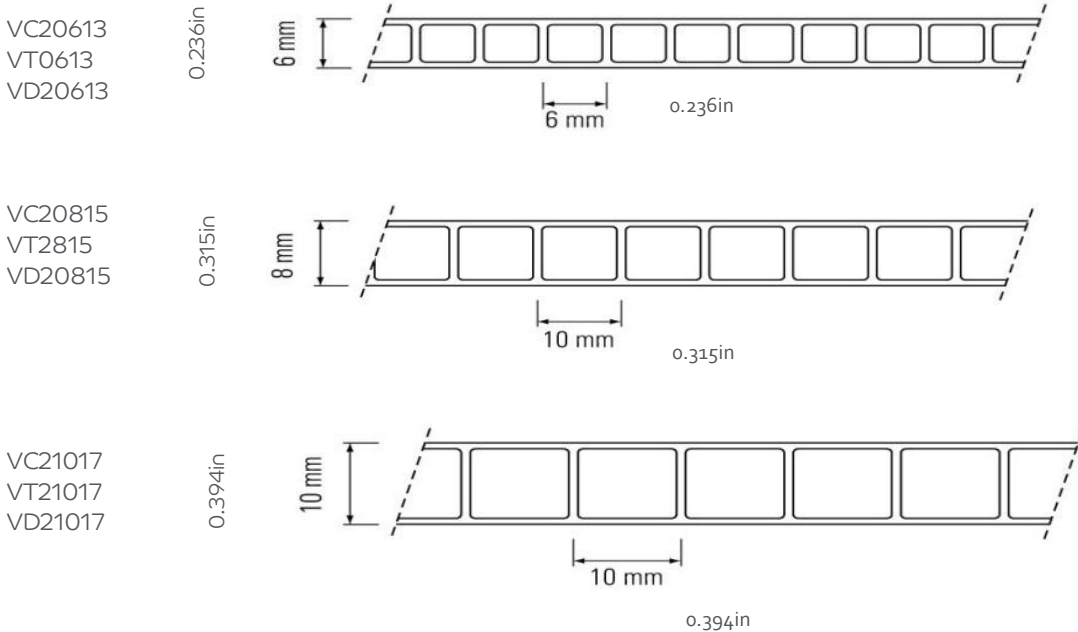
As roofing material VEROLITE™ sheet is subjected to the extremes of weather; like storms, hail, wind, snowfall and ice formation. Under these conditions, the product is virtually unbreakable and is able to accommodate the subsequent temperature change to sunny conditions without breaking or buckling.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

INNER SURFACE: ANTI-DRIP

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

VEROLITE Drippgard 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	LENGTH > 20FT/6M
0.177in 0.205lb/ft ² 4.5mm 1.0 kg/m ²	2RS	+/- 1%	+/-7%	+/-0.5%	+0.472in +12mm	+1.81in +30mm
0.236in 0.266 lb/ft ² 6.0mm 1.3 kg/m ²	2RS	+/- 1%	+/-5%	+/-0.5%	+0.472in +12mm	+1.81in +30mm
0.315in 0.348 lb/ft ² 8.0mm 1.7 kg/m ²	2RS/3TS	+/- 1%	+/-5%	+/-0.5%	+0.472in +12mm	+1.81in +30mm
0.394in 0.409 lb/ft ² 16.0mm 2.0 kg/m ²	2RS/3TS	+/- 1%	+/-5%	+/-0.5%	+0.472in +12mm	+1.81in +30mm
0.63in 0.573 lb/ft ² 16.0mm 2.8 kg/m ²	3TS	+/- 2%	+/-3%	+/-0.5%	+0.472in +12mm	+1.81in +30mm
0.787in 0.614 lb/ft ² 20.0mm 3.0 kg/m ²	3TS	+/- 2%	+/-3%	+/-0.5%	+0.472in +12mm	+1.81in +30mm
0.984in 0.655 lb/ft ² 25.0mm 3.2 kg/m ²	3TS	+/- 2%	+/-3%	+/-0.5%	+0.472in +12mm	+1.81in +30mm

GENERAL GUIDELINES

STORAGE

VEROLITE™ sheet should be stored and protected against atmospheric influences like sun, rain, etc. Care should be exercised when handling and transporting VEROLITE 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 VEROLITE sheet s. 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 sheet. It is strongly advised when using sealing to check compatibility before use.

SAWING

VEROLITE sheet 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 or 3mm per linear meter.

CONTACT US:

Middle East and Africa

SABIC Global Headquarters
PO Box 5101
Riyadh 11422
Saudi Arabia
T +966 (0) 1 225 8000
F +966 (0) 1 225 9000
E info@sabic.com

Americas

Functional Forms
2500 City West
Boulevard Suite 100
Houston, TX 77042
USA
Toll-free (800) 323 3783
F (888) 443 2033
E spinside.sales@sabic.com

Europe

Functional Forms
Plasticslaan 1
4612 PX
Bergen op Zoom
The Netherlands
T +31 (0)164 293678
F +31 (0)164 293272
E ff.info@sabic.com

Asia Pacific

Functional Forms
2550 Xiupu Road
Pudong
201319 Shanghai
China
T +86 21 2037 8188
F +86 21 2037 8288
E ff.info@sabic.com



DISCLAIMER: THE MATERIALS, PRODUCTS AND SERVICES OF SAUDI BASIC INDUSTRIES CORPORATION (SABIC) OR ITS SUBSIDIARIES OR AFFILIATES (“SELLER”) ARE SOLD SUBJECT TO SELLER’S STANDARD CONDITIONS OF SALE, WHICH ARE AVAILABLE UPON REQUEST. INFORMATION AND RECOMMENDATIONS CONTAINED IN THIS DOCUMENT ARE GIVEN IN GOOD FAITH. HOWEVER, SELLER MAKES NO EXPRESS OR IMPLIED REPRESENTATION, WARRANTY OR GUARANTEE (i) THAT ANY RESULTS DESCRIBED IN THIS DOCUMENT WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (ii) AS TO THE EFFECTIVENESS OR SAFETY OF ANY DESIGN OR APPLICATION INCORPORATING SELLER’S MATERIALS, PRODUCTS, SERVICES OR RECOMMENDATIONS. UNLESS OTHERWISE PROVIDED IN SELLER’S STANDARD CONDITIONS OF SALE, SELLER SHALL NOT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS MATERIALS, PRODUCTS, SERVICES OR RECOMMENDATIONS DESCRIBED IN THIS DOCUMENT. Each user is responsible for making its own determination as to the suitability of Seller’s materials, products, services or recommendations for the user’s particular use through appropriate end-use and other testing and analysis. Nothing in any document or oral statement shall be deemed to alter or waive any provision of Seller’s Standard Conditions of Sale or this Disclaimer, unless it is specifically agreed to in a writing signed by Seller. Statements by Seller concerning a possible use of any material, product, service or design do not, are not intended to, and should not be construed to grant any license under any patent or other intellectual property right of Seller or as a recommendation for the use of any material, product, service or design in a manner that infringes any patent or other intellectual property right. SABIC and brands marked with ™ are trademarks of SABIC or its subsidiaries or affiliates, unless otherwise noted.

© 2021 Saudi Basic Industries Corporation (SABIC). All Rights Reserved.

Any brands, products or services of other companies referenced in this document are the trademarks, service marks and/or trade names of their respective holders.