



WALKER TEXTURES® ACID-ETCHED GLASS

Acid-etched glass creates a translucent satin appearance which obscures view while maintaining a high level of light transmittance. The consistent quality, durability, ease of maintenance and rich look of the Walker Textures® products are unmatched. With four different levels of translucency, architects have a wide spectrum to choose from to meet their every need.

Walker Textures® four acid-etched glass finishes are: Satinlite, Satin, Velour and Opaque.

VALIDATED ECO-DECLARATION

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PRODUCT SPECIFICATIONS	ENVIRONMENTAL IMPACTS	TECHNICAL PERFORMANCES
References Walker Textures® acid-etched glass in four finishes: Satinlite, Satin, Velour, Opaque.	Life Cycle Assessment Oct. 2017 Product's carbon footprint Oct. 2017	Performance tests ASTM C1036-16, ASTM C501, ASTM C1378, ASTM C158, ASTM D1003-13, MOHs
Final manufacturing location Montreal, QC H1J 1L5 CANADA	Environmental Product Declaration Product-specific EPD, Type III ISO 14025:2006 Oct. 2017 - Oct. 2022	Expected life -
Composition Glass	INGREDIENTS AND EMISSIONS	MANUFACTURER'S ENVIRONMENTAL MANAGEMENT
ATTRIBUTES	Declaration of chemical ingredients 100 ppm	ISO 14001 Certification -
Recycled content Pre-consumer: 0% Post-consumer: 0%	Type of declaration HPD® version 2.1 Health Product Declaration®	Extended Producer Responsibility (Take Back Program) -
Sourcing of raw materials Data collection from suppliers has been conducted for 100% of product components.	Emission test -	Corporate Sustainability Report (CSR: GRI, ISO 26000, BNQ 21000 or others) -
FSC® Certification -	VOCs N/A	CERTIFICATIONS AND CONFORMITIES
Rapidly renewable materials -	Formaldehyde -	
Biobased materials -	Others -	

Walker Glass Company Ltd. is a dynamic market-driven enterprise with over 75 years of experience in the glass and mirror industry in North America. Since 2002, Walker has been a leader in the production of acid-etched glass and mirror; it offers a multitude of product lines that respond to today's demanding market needs. Innovation and creativity are at the heart of its development.

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MasterFormat®: **08 81 00**
08 80 50

Validated Eco-Declaration:
VED17-1079-01

Original issue date: **2017/10**

Period of validity:

2018/11 to 2019/11



ENVIRONMENTAL DATA SHEET

WALKER TEXTURES® ACID-ETCHED GLASS



Models

Finishes: Satinlite, Satin, Velour and Opaque

Surface(s): All four finishes are available with etching on one face. The Satin, Velour and Opaque finishes are also available with etching on both faces

Thicknesses: 3 mm to 19 mm, subject to glass availability

Substrates: Clear, bronze, grey, black, blue, green or ultra-clear

Dimensions

Depending on the substrate and finish

Length: Up to 204 inches

Height: Up to 100 inches

Characteristics

The acid-etched glass:

- Can be used for interior as well as for exterior applications;
- Does not restrict light flow;
- Consistent finish from one panel to the other;
- Will not change in appearance over time;
- Ease of maintenance.

ATTRIBUTES

RECYCLED CONTENT

Final product	Weight ratio	Pre-consumer	Post-consumer
Walker Textures® Acid-etched Glass	100%	0%	0%

Validated Eco-Declaration – Recycled Content

Methodology: on-site audit, supply chain evaluation, analysis and validation of the recycled content data according to the weight ratio of each of the components used in manufacturing the final product.

Vertima's procedure: VERT-032008-01, Second Edition.

SOURCING OF RAW MATERIALS

Weight ratio	Final manufacturing location
100%	Montreal, QC H1J 1L5 CANADA

Validated Eco-Declaration – Sourcing of raw materials

Methodology: on-site audit, supply chain evaluation, analysis and validation of the sourcing of raw materials data according to the weight ratio of each of the components used in manufacturing the final product.

Vertima's procedure: VERT-032008-02, Second Edition.

Component	Weight ratio	Supplier locations	Extraction locations	Transportation from suppliers
Glass	100%	United States (PA, NY, NC)	N/A	Road

The origin and extraction locations of raw materials used in manufacturing Walker Textures® acid-etched glass have not been documented.

The data included in this Environmental Data Sheet has been provided by the client and the suppliers, who are responsible for its veracity and its integrity. Vertima follows a rigorous protocol, including an on-site audit of the factory, an audit of the manufacturer's supply chain documentation, and the analysis and validation of all supporting documents. However, Vertima cannot be held responsible for false or misleading information that may cause any loss or damage suffered, caused in all or in part, by errors and omissions relative to the collection, compilation and/or interpretation of data.

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ATTRIBUTES (CONTINUED)

SOURCING OF RAW MATERIALS (CONTINUED)



Data collection from suppliers has been conducted for 100% of Walker Textures® acid-etched glass components.



ENVIRONMENTAL IMPACTS

ENVIRONMENTAL PRODUCT DECLARATION (EPD)

Product-specific EPD, ISO 14025:2006, Type III

Walker Textures® acid-etched glass has an EPD that was prepared by Vertima. CSA Group is the program operator. The life cycle assessment, verified by the third party Athena Sustainable Materials Institute and on which is based this EPD, has been done by Vertima.

Reference PCR

UL Environment (2016). PCR Guidance for Building-Related Products and Services. Part B: Processed Glass EPD Requirements. Version 1.0. 14 pp.

Declared Unit	Scope of the LCA	Reference service life	Period of validity
1 m ² of processed glass	Cradle-to-gate	N/A	October 2017 to October 2022

Table of environmental impacts for 1 m² of Walker Textures® acid-etched glass.

Impact categories	Unit	Results per declared unit
Global warming potential	kg CO ₂ eq	21.3
Acidification potential	kg SO ₂ eq	0.207
Eutrophization potential	Kg N eq	0.0293
Smog creation potential	kg O ₃ eq	4.95
Ozone depletion potential	kg CFC-11 eq	1.24.10 ⁻⁶
Consumption of total primary energy	Unit	Results per declared unit
Non-renewable fossil	MJ, LHV	463
Non-renewable nuclear	MJ, LHV	24.0

Type III Environmental Product Declaration developed in accordance with ISO 14025:2006

Source: EPD report

These results are specific to Walker Textures® acid-etched glass on one face only with Satinlite, Satin, Velour and Opaque finishes.

Validated Eco-Declaration – Environmental Product Declaration (EPD)

Methodology: validation of documents and methodology surrounding the product LCA report and EPD.

Vertima's procedure: VERT-032010-03, Second Edition.

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INGREDIENTS AND EMISSIONS

DECLARATION OF CHEMICAL INGREDIENTS



Type of declaration: Health Product Declaration® (HPD®) version 2.1

Period of validity: September 13, 2017 to September 13, 2020

Summary of product contents and results from screening individual chemical substances against HPD Priority Lists¹ and the GreenScreen for Safer Chemicals®².

Health Product Declaration® URL: <http://www.hpd-collaborative.org/hpd-public-repository/>

The Health Product Declaration® and logo is owned by the Health Product Declaration® Collaborative and is used with permission.

Declaration: ■ Prepared by Vertima inc., third party approved by HPDC

Ingredients inventory threshold: 100 ppm

Full disclosure of intentional ingredients: Yes

Full disclosure of known hazards: Yes

Hazards associated with the product ingredients:

This HPD Standard describes a declaration of product content and direct health hazards associated with exposure to its individual contents. The Declaration is not an assessment of risks associated with actual use of the product. It does not address the potential health impacts of substances used or created during manufacture that do not appear in the final product as residuals, nor substances created during combustion or other degradation processes.

Highest concern GreenScreen® Benchmark: List Translator Likely Benchmark 1³

- | | | |
|---|---|--|
| <input type="checkbox"/> PBT (Persistent, Bioaccumulative, Toxic) | <input checked="" type="checkbox"/> Respiratory | <input type="checkbox"/> Physical hazard |
| <input checked="" type="checkbox"/> Cancer | <input type="checkbox"/> Neurotoxicity | <input type="checkbox"/> Global warming |
| <input checked="" type="checkbox"/> Gene Mutation | <input type="checkbox"/> Mammal | <input type="checkbox"/> Ozone depletion |
| <input type="checkbox"/> Development | <input type="checkbox"/> Land toxicity | <input type="checkbox"/> Multiple |
| <input type="checkbox"/> Reproductive | <input type="checkbox"/> Aquatic toxicity | <input type="checkbox"/> Unknown |
| <input type="checkbox"/> Endocrine | <input type="checkbox"/> Skin or eye | |

¹Please refer to Annex D of HPD® Open Standard Version 2.1, May 2017: <http://www.hpd-collaborative.org>

²GreenScreen for Safer Chemicals® method: <http://www.greenscreenchemicals.org/>

³GreenScreen (GS) Benchmark scores of chemical ingredients: Benchmark 1 (Avoid, chemical of high concern), Benchmark 2 (Use but search for safer substitutes), Benchmark 3 (Use but still opportunity for improvement), Benchmark 4 (Prefer, safer chemical).

TABLE OF INGREDIENTS

Name	Role	Weight ratio	CAS ¹	GreenScreen® ²	Note(s) (for more details refer to the HPD®)
Glass	Main material	100%	N/A	LT-1	LT-P1, LT-UNK, BM-2 scores also present

¹Only the CAS numbers with the score of highest concern are listed. The complete list of substances can be found in the HPD®.

²GS List Translator (LT) scores of chemical ingredients: LT-1, likely GS Benchmark 1; LT-P1, possible GS Benchmark 1; LT-U or LT-UNK, present on GS Specified Lists but there is insufficient information to classify the hazards as LT-1 or LT-P1 (does not mean the chemical is safe).

Validated Eco-Declaration – Declaration of chemical ingredients

Methodology: validation of the documentation confirming the methodology and reporting of chemical ingredients.

Vertima's procedure: VERT-032009-01, Second Edition.

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INGREDIENTS AND EMISSIONS (CONTINUED)

VOLATILE ORGANIC COMPOUNDS (VOCs)

Walker Textures® acid-etched glass is an inherently non-emitting source of VOCs.

Validated Eco-Declaration – Emissions and Volatile Organic Compounds (VOCs)
 Methodology: validation of documents attesting VOCs emissions.
 Vertima's procedure: VERT-032009-02, Second Edition.

TECHNICAL PERFORMANCES

PERFORMANCE TESTS

Non-exhaustive list. Refer to the technical documentation of Walker Textures® acid-etched glass for more details.

- ASTM C1036-16 - Standard Specification for Flat Glass
- ASTM-C501 - Resistance to Wear
- ASTM-C1378 - Resistance to Staining
- MOHs - Scratch Hardness
- ASTM-C158 - Modulus of Rupture
- ASTM D1003-13 - Daylight Diffusion Properties

Performance data of all four finishes on a 6 mm (1/4") glass in clear and ultra-clear (Starphire®). Acid-etched glass on one face only.

Acid-etched finish	Glass substrate	Transmission of visible light (Tvis) ^{1,2}	Transmission of total solar energy (g-value) ^{1,2}	Solar heat gain coefficient (SHGC) ^{1,3}	Daylight diffusion		
					Total luminous transmittance ⁴	Diffuse transmittance ⁵	Haze ⁶
Opaque	Clear	91%	80%	0.84	82.50%	75.09%	90.73%
	Ultra-clear (Starphire®)	93%	90%	0.90	-	-	-
Velour	Clear	91%	82%	0.85	88.44%	79.00%	89.30%
	Ultra-clear (Starphire®)	92%	89%	0.90	-	-	-
Satin	Clear	89%	79%	0.83	72.75%	32.66%	44.89%
	Ultra-clear (Starphire®)	90%	88%	0.89	-	-	-
Satinlite	Clear	88%	80%	0.84	75.41%	9.73%	12.90%
	Ultra-clear (Starphire®)	90%	89%	0.90	-	-	-

1. Figures may vary due to manufacturing tolerances. All tabulated data is based on NFRC methodology using the LBNL's Window 5,2 software.

2. Transmittance and reflectance values based on spectrophotometric measurements and energy distribution of solar radiation.

3. Solar Heat Gain Coefficient (SHGC) represents the solar heat gain through the glass relative to the incident solar radiation. It is equal to 86% of the shading coefficient.

4. Total Luminous Transmittance is the ratio of transmitted light to the incident light and is influenced by the absorption and reflection properties.

5. Diffuse Transmittance is the portion of light that is scattered or diffused by the glass surface.

6. Haze is the percentage of light which in passing through deviates from the incident beam greater than 2.5 degrees on the average. Haze is equal to the diffuse transmittance divided by the total luminous transmittance.

NB: Values are for indication purposes only and are subject to variation according to conditions of measurement, manufacture and/or application.

Source: Walker Glass Company Ltd.



TECHNICAL PERFORMANCES (CONTINUED)

WARRANTY



Limited Warranty on Surface Degradation

Walker Glass Company Ltd. warrants, for a period of 10 years following the date of original purchase, that the etched surface will not degrade, provided that the surface is not subjected to any conditions that would otherwise lead to premature degradation of unetched flat glass.

For more information on Walker's warranties, please contact the customer service department.

Source: Walker Glass Company Ltd.

MANUFACTURER'S ENVIRONMENTAL MANAGEMENT PROGRAM

MANUFACTURER'S COMMITMENT

Walker Glass Company Ltd. is fully committed to the diligent protection of both the environment and the health and safety of its workers and its customers' workers.

Our manufacturing process includes state-of-the-art environmental control equipment and our workers are equipped with the highest quality personal protection gear.

Our research and development process strives to create architectural products that have a sustainable impact on buildings and its occupants.

Source: Walker Glass Company Ltd.



ENVIRONMENTAL DATA SHEET

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PRODUCT CONTRIBUTION SUMMARY

LEED® v4 requirements for Building Design + Construction (BD+C)

New Construction, Core and Shell, School, Retail, Data Centers, Warehouse and Distribution Centers, Hospitality and Healthcare.

LEED® v4 requirements for Interior Design + Construction (ID+C)

Commercial Interiors, Retail and Hospitality.

MATERIALS AND RESOURCES		PRODUCT CONTRIBUTIONS	
MR	Building Product Disclosure and Optimization – Environmental Product Declaration (EPD) Option 1: Environmental Product Declaration (1 point) Walker Textures® acid-etched glass contributes to this credit due to the availability of a product-specific EPD (Type III) and is valued as 1 whole product out of the 20 needed for the purposes of credit achievement calculation.	Contribute	ENVIRONMENTAL IMPACTS
			Product-specific EPD (Type III) compliant to ISO 14025:2006.
MR	Building Product Disclosure and Optimization – Material Ingredients Option 1: Material ingredients reporting (1 point) Walker Textures® acid-etched glass contributes to this credit due to the availability of Health Product Declarations® and is valued as 1 whole product out of the 20 needed for the purposes of credit achievement calculation.	Contribute	INGREDIENTS AND EMISSIONS
			HPD® version 2.1 Health Product Declaration®
INDOOR ENVIRONMENTAL QUALITY		PRODUCT CONTRIBUTIONS	
EQ	Low-Emitting Materials Option 1: Product category calculation (1-3 points) For the product category, walls, thermal and acoustical insulation, 100% of all products must meet the requirements.	Contribute	INGREDIENTS AND EMISSIONS
			Glazing is excluded from the scope of this credit. Moreover, glass is an inherently non-emitting source.
EQ	Daylight (1-3 points) Design to maximize daylight Consider how best to allocate interior space to ensure that daylight is available in all regularly occupied spaces. Enclosure design and furniture selection will affect daylight penetration. Possible design strategies include the following: Use transparent partitions or interior glazing to provide daylight to enclosed spaces. Unlike the BD+C rating system, ID+C rating system includes any permanent interior obstructions as well as moveable furniture and partitions.	Contribute	TECHNICAL PERFORMANCES
			Within an assembly, Walker Textures® acid-etched glass may contribute to this credit if design choices are coherent with the credit.
PILOT CREDITS		PRODUCT CONTRIBUTIONS	
PC	Pilot Credit 55 - Bird Collision Deterrence (1 point) Reduce bird injury and mortality from in-flight collisions with buildings.	Contribute	Within an assembly, Walker Textures® AviProtek® acid-etched glass with bird-safe design may contribute to this pilot credit.

It is important to consider that the total amount of possible points reflects the number of achievable points in each credit category. The product itself cannot achieve this score, as defined above, but is considered as a beneficial element in order to achieve LEED® credits.

OTHER ENVIRONMENTAL BENEFITS

- Use the Velour or Opaque etched finishes to increase the dispersion of natural daylight in building interiors to reduce heat spots.
- Use the Velour or Opaque etched finishes to disperse naturally harvested light throughout the space to reduce the requirement for electric light.

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