Acid-etched Glass
by Walker Glass Company Ltd.

CLASSIFICATION: 08 81 00

PRODUCT DESCRIPTION: This HPD covers Walker’s Acid-etched Glass in multiple colors, dimensions and thickness. Acid-etched Glass is suitable for interior and exterior applications, such as interior partitions, office enclosures, shower and bath enclosures, interior and exterior doors, balustrades and railings, closet doors, display fixtures, flooring and stairs, spandrel, sealed units, backsplashes, furniture and kitchen components, shelving, and wall decoration. [Other applicable CSI Masterformat identifiers: 08 41 00 – Entrances and Storefronts / 08 42 00 – Entrances / 08 43 00 – Storefronts / 08 44 00 – Glazed Curtainwalls / 08 50 00 – Windows / 08 60 00 – Roof, Windows and Skylights / 08 81 13 – Decorative Glass Glazing / 10 22 00 – Partitions / 10 28 19.16 – Shower Doors / 08 44 30 Slip Resistant Acid Etched Glazing.]

Section 1: Summary

CONTENT IN DESCENDING ORDER OF QUANTITY
Summary of product contents and results from screening individual chemical substances against HPD Priority Hazard Lists and the GreenScreen for Safer Chemicals®. The HPD does not assess whether using or handling this product will expose individuals to its chemical substances or any health risk. Refer to Section 2 for further details.

MATERIAL | SUBSTANCE | RESIDUAL OR IMPURITY
ACID-ETCHED GLASS | SILICA, AMORPHOUS (SILICON DIOXIDE) | LT-P1
CAN SODIUM OXIDE (SODIUM OXIDE) | LT-UNK
CALCIUM OXIDE (CALCIUM OXIDE) | LT-P1
MAGNESIUM OXIDE (MAGNESIUM OXIDE) | LT-UNK
ALUMINUM OXIDE (ALUMINUM OXIDE) | LT-P1
RES SODIUM SULFATE (SALT CAKE) | LT-UNK
FERRIC OXIDE (DIIRON TRIOXIDE) | BM-2
CARBON (COAL) | LT-UNK
COBALT COMPOUNDS (COBALT COMPOUNDS) | LT-1
NICKEL COMPOUNDS (NICKEL COMPOUNDS) | LT-1

VOLATILE ORGANIC COMPOUND (VOC) CONTENT
VOC Content data is not applicable for this product category.

CERTIFICATIONS AND COMPLIANCE
See Section 3 for additional listings.
VOC emissions: Inherently non-emitting source per LEED® - Glass

CONSISTENCY WITH OTHER PROGRAMS
Pre-checked for LEED v4 Material Ingredients, Option 1
Section 2: Content in Descending Order of Quantity

This section lists contents in a product based on specific threshold(s) and reports detailed health information including hazards. This HPD uses the inventory method indicated above, which is one of three possible methods:

- Basic Inventory method with Product-level threshold.
- Nested Material Inventory method with Product-level threshold
- Nested Material Inventory method with individual Material-level thresholds

Definitions and requirements for the three inventory methods and requirements for each data field can be found in the HPD Open Standard version 2.1, available on the HPDC website at: www.hpd-collaborative.org/hpd-2-1-standard

ACID-ETCHED GLASS

PRODUCT THRESHOLD: 100 ppm

RESIDUALS AND IMPURITIES CONSIDERED: Partially

RESIDUALS AND IMPURITIES NOTES: Walker confirms that there are no residuals or impurities remaining on the acid-etched glass surface following the etching process. Walker has three different suppliers of soda-lime glass and therefore there are several levels of disclosure of residuals and impurities. Supplier #1 statement: Impurities coming from this supplier were not included in the HPD since they are potentially present in the glass at level undetected or in the parts per billion range. Those contaminants include chromium (Cr), cadmium (Cd) and/or lead (Pb) derived from mined raw materials such as silica or limestone at significantly less than the threshold limits for RoHS. These metals are the only RoHS hazardous substances that have the potential to be in the glass. Supplier #2 statement: All glasses sold by this supplier are regularly analyzed with an elemental detection limit of 10 ppm or lower. Pb, Cr, As, Sb, V and Cd may rarely be present in float glass as trace level contaminants and are never present at greater than 20 ppm. Therefore they were not included in the HPD. Co, Se and Ni may be added to impart colour to some tinted glasses. Co is never present at greater than 300 ppm, Se is never present at more than 50 ppm (not disclosed), Ni is typically not present at greater than 200 ppm but may be 800 ppm in some specific dark grey products. - No statement regarding impurities for Supplier #3.

OTHER PRODUCT NOTES: The main material used for acid-etched glass is soda-lime glass. The composition disclosed below corresponds to an average and generic composition for soda-lime glass. Walker's Acid-etched Glass is available in several colors: Clear, Bronze, Grey, Blue, Black, Low-iron / Starphire, Green, etc. Not all suppliers provide tinted glass. The following statements represent the information received from tinted glass suppliers. Supplier #2 statement: Co, Se and Ni may be added to impart colour to some tinted glasses. Co is never present at greater than 300 ppm, Se is never present at more than 50 ppm (not disclosed), Ni is typically not present at greater than 200 ppm but may be 800 ppm in some specific dark grey products. Supplier #3 statement: Tinted glasses are very similar in composition to clear glass with adjustments to trace elements for coloring purposes and sometimes accompanied by minor changes to the other components where necessary for proper melting.

SILICA, AMORPHOUS (SILICON DIOXIDE)

<table>
<thead>
<tr>
<th>%: 69.0000 - 74.0000</th>
<th>GS: LT-P1</th>
<th>RC: None</th>
<th>NANO: No</th>
<th>ROLE: Network former</th>
</tr>
</thead>
</table>

HAZARDS: AGENCY(IES) WITH WARNINGS:
CANCER Japan - GHS Carcinogenicity - Category 1A

SUBSTANCE NOTES: Main ingredient. See Material Notes.

SODIUM OXIDE (SODIUM OXIDE)

<table>
<thead>
<tr>
<th>%: 12.0000 - 16.0000</th>
<th>GS: LT-UNK</th>
<th>RC: None</th>
<th>NANO: No</th>
<th>ROLE: Fluxing agent</th>
</tr>
</thead>
</table>

HAZARDS: AGENCY(IES) WITH WARNINGS:
None Found No warnings found on HPD Priority lists
<table>
<thead>
<tr>
<th>Substance</th>
<th>ID</th>
<th>%</th>
<th>GS</th>
<th>RC</th>
<th>NANO</th>
<th>ROLE</th>
<th>Hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium Oxide (Calcium Oxide)</td>
<td>1305-78-8</td>
<td>5.0000 - 12.0000</td>
<td>LT-P1</td>
<td>None</td>
<td>No</td>
<td>Network modifier</td>
<td>None Found, No warnings found on HPD Priority lists</td>
</tr>
<tr>
<td>Magnesium Oxide (Magnesium Oxide)</td>
<td>1309-48-4</td>
<td>0.0000 - 6.0000</td>
<td>LT-UNK</td>
<td>None</td>
<td>No</td>
<td>Network modifier</td>
<td>None Found, No warnings found on HPD Priority lists</td>
</tr>
<tr>
<td>Aluminum Oxide (Aluminum Oxide)</td>
<td>1344-28-1</td>
<td>0.0000 - 3.0000</td>
<td>LT-P1</td>
<td>None</td>
<td>No</td>
<td>Durability/viscosity/workability enhancer</td>
<td>Respiratory: AOEC - Asthmagens, Asthagen (ARs) - sensitizer-induced - inhalable forms only</td>
</tr>
<tr>
<td>Sodium Sulfate (Salt Cake)</td>
<td>7757-82-6</td>
<td>0.0000 - 1.0000</td>
<td>LT-UNK</td>
<td>None</td>
<td>No</td>
<td>Fining agent</td>
<td>None Found, No warnings found on HPD Priority lists</td>
</tr>
<tr>
<td>Ferric Oxide (Diiron Trioxide)</td>
<td>1309-37-1</td>
<td>0.0000 - 1.0000</td>
<td>BM-2</td>
<td>None</td>
<td>No</td>
<td>Coloring agent</td>
<td>Cancer: MAK, Carcinogen Group 3B - Evidence of carcinogenic effects but not</td>
</tr>
</tbody>
</table>

Substance Notes: See Material Notes.
**CARBON (COAL)**

<table>
<thead>
<tr>
<th>%: 0.0000 - 1.0000</th>
<th>GB: LT-UNK</th>
<th>RC: None</th>
<th>NANO: No</th>
<th>ROLE: Reducing agent</th>
</tr>
</thead>
</table>

**HAZARDS:**

None Found

**SUBSTANCE NOTES:** Trace element for supplier #1. Present in some glasses.

**COBALT COMPOUNDS (COBALT COMPOUNDS)**

<table>
<thead>
<tr>
<th>%: 0.0000 - 0.0300</th>
<th>GB: LT-1</th>
<th>RC: None</th>
<th>NANO: No</th>
<th>ROLE: Coloring agent</th>
</tr>
</thead>
</table>

**HAZARDS:**

RESPIRATORY: AOEC - Asthmagens

CANCER: MAK

RESPIRATORY: MAK

GENE MUTATION: MAK

**SUBSTANCE NOTES:** Present in some tinted glasses for supplier #2.

**NICKEL COMPOUNDS (NICKEL COMPOUNDS)**

<table>
<thead>
<tr>
<th>%: 0.0000 - 0.0800</th>
<th>GB: LT-1</th>
<th>RC: None</th>
<th>NANO: No</th>
<th>ROLE: Coloring agent</th>
</tr>
</thead>
</table>

**HAZARDS:**

CANCER: IARC

CANCER: CA EPA - Prop 65

CANCER: US CDC - Occupational Carcinogens

RESPIRATORY: AOEC - Asthmagens

CANCER: MAK

RESPIRATORY: MAK

**SUBSTANCE NOTES:** Up to 800 ppm in dark grey glasses for supplier #2.
Section 3: Certifications and Compliance

This section lists applicable certification and standards compliance information for VOC emissions and VOC content. Other types of health or environmental performance testing or certifications completed for the product may be provided.

### VOC EMISSIONS

**Inherently non-emitting source per LEED® - Glass**

<table>
<thead>
<tr>
<th>CERTIFYING PARTY:</th>
<th>Self-declared</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPLICABLE FACILITIES:</td>
<td>N/A</td>
</tr>
<tr>
<td>CERTIFICATE URL:</td>
<td></td>
</tr>
<tr>
<td>ISSUE DATE:</td>
<td>2017-08-10</td>
</tr>
<tr>
<td>EXPIRY DATE:</td>
<td></td>
</tr>
<tr>
<td>CERTIFIER OR LAB:</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**CERTIFICATION AND COMPLIANCE NOTES:** Inherently nonemitting sources: Products that are inherently nonemitting sources of VOCs (stone, ceramic, powder-coated metals, plated or anodized metal, glass, concrete, clay brick, and unfinished or untreated solid wood flooring) are considered fully compliant without any VOC emissions testing if they do not include integral organic-based surface coatings, binders, or sealants.

Section 4: Accessories

This section lists related products or materials that the manufacturer requires or recommends for installation (such as adhesives or fasteners), maintenance, cleaning, or operations. For information relating to the contents of these related products, refer to their applicable Health Product Declarations, if available.

No accessories are required for this product.

Section 5: General Notes

Residuals and impurities were partially considered since not all suppliers had the same amount of disclosure in their documentation. Information about residuals and impurities came from documents provided by Walker’s suppliers. Additional details are provided in Residuals / Impurities Notes.

Section 6: References

MANUFACTURER INFORMATION

- **MANUFACTURER:** Walker Glass Company Ltd.
- **ADDRESS:** 9551 Ray Lawson Blvd
  Montreal QC H1J 1L5, Canada
- **WEBSITE:** www.walkerglass.com
- **CONTACT NAME:** Vince Grippo
- **TITLE:** Research and Development Director
- **PHONE:** 514 352 3030
- **EMAIL:** vince@walkerglass.com
The Health Product Declaration (HPD) Open Standard provides for the disclosure of product contents and potential associated human and environmental health hazards. Hazard associations are based on the HPD Priority Hazard Lists, the GreenScreen List Translator™, and when available, full GreenScreen® assessments. The HPD Open Standard v2.1 is not:

- a method for the assessment of exposure or risk associated with product handling or use,
- a method for assessing potential health impacts of: (i) substances used or created during the manufacturing process or (ii) substances created after the product is delivered for end use.

Information about life cycle, exposure and/or risk assessments performed on the product may be reported by the manufacturer in appropriate Notes sections, and/or, where applicable, in the Certifications section.

The HPD Open Standard was created and is supported by the Health Product Declaration Collaborative (the HPD Collaborative), a customer-led organization composed of stakeholders throughout the building industry that is committed to the continuous improvement of building products through transparency, openness, and innovation throughout the product supply chain.

The product manufacturer and any applicable independent verifier are solely responsible for the accuracy of statements and claims made in this HPD and for compliance with the HPD standard noted.