



**1. Product Name**  
Glass Aggregate

**2. Manufacturer**

Heritage Glass, Inc.  
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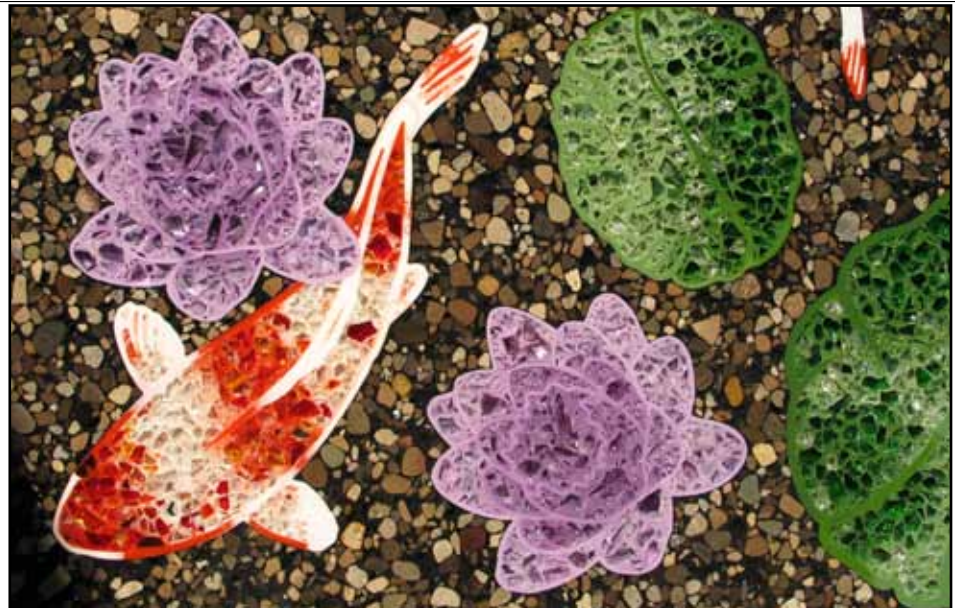
**3. Product Description**

**BASIC USE**

Heritage Glass, Inc., began in 1978 by creating color formulations and faceted glass for the stained glass market. The best of these products was incorporated into an innovative process for recycling and reworking glass bottles and window glass. The result is a unique terrazzo aggregate with a multidimensional shape and permanent color not found in natural marble aggregates. Today, Heritage Glass, Inc., develops and supplies colored glass aggregate to the terrazzo industry for use in creating decorative and long-lasting flooring, walls, countertops, stairs, patios and landscapes.

**COMPOSITION & MATERIALS**

Heritage Glass aggregates are comprised of post-industrial and post-consumer recycled glass content. They are nonporous, resistant to most acids, and may be used alone or in combination with marble or other aggregates. Abrasion resistance and hardness of 4.5 - 6 on the Mohs' hardness scale exceeds that of many traditional materials used in terrazzo.



**SIZES**

Heritage Glass aggregate corresponds to sizes specified by The National Terrazzo and Mosaic Association (NTMA) and is available in sizes 0 - 6. Generally, sizes 0 - 2 are used only in epoxy installations, while all sizes may be used in cement installations. Plus sizes and mesh sizes are available upon request.

**COLOR**

The color in Heritage Glass aggregates permeates the transparent glass, creating a luminous sense of depth not possible with aggregates such as marble, metal, plastic chips or crushed scrap glass. Glass aggregate is available in 45 vibrant color collections, with each collection containing one or more separate colors.

Individual colors within a collection are designated by an alphabetic prefix (referring to the formulation), the color name and the color intensity number. The color intensity scale ranges from 1 - 9, with lower numbers indicating lighter color and less light blocked, and higher numbers indicating darker color and more light blocked.

Custom colors are available, and an optional silver coating can be added to achieve a reflective sparkle effect after grinding.

Color collections can be viewed online at [www.heritageglass.net](http://www.heritageglass.net). Color samples are also available by request from Heritage Glass, Inc. For best results, color selection should be made from an actual terrazzo sample.

Note - Color saturation decreases as the size of the aggregate increases due to the transparency of glass. For the same reason, colors will appear differently in a colored matrix because the background color will show through the glass.

**BENEFITS**

- For use in both interior and exterior applications
- Fractured glass surface and multidimensional shape ensure a secure hold in epoxy or cement
- When used with epoxy terrazzo, provides limitless design options for floors, countertops, window sills, tiles, patios and other projects
- Any epoxy matrix color can be used with Heritage Glass aggregates to create a unique look
- Offers the lowest life cycle cost of all commercial flooring when used in an epoxy terrazzo system
- Has a minimum of 98% recycled content, making it a good choice for sustainable development applications

**LIMITATIONS**

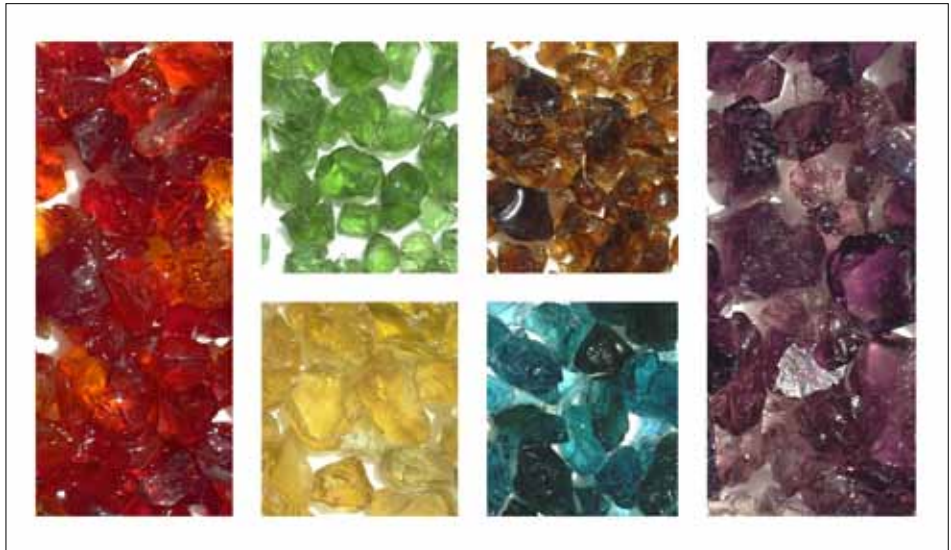
Required thickness can be a deciding factor in identifying the terrazzo system best suited for a given application. Below are minimum thicknesses and weights for respective terrazzo systems.

To compare different terrazzo system types and their respective advantages and limitations, see Table 4.

Size of aggregate	Retained in screen size	Passes through screen size
00	30 mesh	20 mesh
0	1/16" (1.6 mm)	1/8" (3.2 mm)
1	1/8" (3.2 mm)	1/4" (6.4 mm)
2	1/4" (6.4 mm)	3/8" (9.5 mm)
3	3/8" (9.5 mm)	1/2" (12.7 mm)
4-6	1/2" (12.7 mm)	3/4" (19.1 mm)

Table 2 AGGREGATE COLOR COLLECTIONS

Amber Bottles	FN Green 3
Apricot	Forest Green
Aqua 2	Go Amber 2
Aqua 5	Green Bottles
Autumn Fields	K Blue 4
Black	Mixed Bottles
Blue Bottles	Nordic
Burnt Orange	Pink
CA Red	Plum
Calm Sea	Polk Gold
Chocolate Chip	Raspberry
Clear	Sage Green
Co Blue 1	Silver Coated
Co Blue 3	Springtime
Co Blue 5	T Blue 1
Co Blue 7	T Blue 5
CR Green 1	T Orange
CR Green 6	Utah House
CR Green 9	War Dance
Crushed Mirror	Weathered
Dark Blue Violet	White
Dave's Green	Yellow
Drake	



- ASTM C494 Standard Specification for Chemical Admixtures for Concrete
- ASTM C171 Standard Specification for Sheet Materials for Curing Concrete
- ASTM C138 Standard Test Method for Unit Weight, Yield, and Air Content (Gravimetric) of Concrete

**APPROVALS**

The National Terrazzo and Mosaic Association (NTMA)

**ENVIRONMENTAL CONSIDERATIONS**

Heritage Glass aggregates contain 98% minimum recycled content, qualifying their use for LEED credits. A certificate of recycled content for each lot number is available upon request.

**5. Installation**

The following installation instructions are specific to the installation of terrazzo using thin set epoxy resin. Installation instructions and recommendations for other applications can be obtained from Heritage Glass, Inc.

**PREPARATORY WORK**

**Storage and Handling**

Deliver materials in a manner to prevent damage or contamination to material containers. Store materials in a clean, dry location, heated to a minimum of 50 degrees F (10 degrees C).

Inspect areas to receive terrazzo for defects that could affect proper terrazzo installation, including cracks and deviations beyond allowable tolerances for concrete slab work and cracks. Ensure that the area is

clean and free of foreign matter. Do not begin installation until all deficiencies are corrected.

**METHODS**

Concrete subfloor level tolerance must be 1/4" in 10' (6.4 mm in 3 m). Any surface irregularity that requires repair must be performed with epoxy fillers and aggregates recommended by the epoxy resin manufacturer. Maintain ambient room and floor temperature at 50 degrees (10 degrees C) or above during terrazzo installation and for 72 hours before and after floor installation. Concrete substrate must be tested to verify acceptable moisture levels before installation.

Testing must be in accordance with ASTM F2170 or by use of a calcium chloride test. Acceptable moisture levels must conform with those established by the NTMA for use with resin matrix terrazzo. A moisture vapor barrier may be required for the subfloor.

	Thickness	Weight
Interior, exterior sand cushion, Venetian terrazzo	2 1/2" (64 mm)	30 psf (146 kg/m2)
Exterior bonded	2" (51 mm)	20 psf (98 kg/m2)
Interior, exterior polyacrylate	1/2" (12.7 mm)	3 psf (15 kg/m2)
Interior epoxy resin terrazzo	3/8" (9.5 mm)	3 psf (15 kg/m2)

**4. Technical Data**

**APPLICABLE STANDARDS**

American Association of State Highway and Transportation Officials (AASHTO) - AASHTO T277 Standard Method of Test for Rapid Determination of the Chloride Permeability of Concrete

**American Concrete Institute (ACI)**

- ACI 301 Specifications for Structural Concrete for Buildings
- ACI 302 Guide for Concrete Floor and Slab Construction
- ACI 318 Building Code Requirements for Structural Plain Concrete and Commentary

**ASTM International**

- ASTM C33 Standard Specification for Concrete Aggregates
- ASTM C94 Standard Specification for Ready-Mixed Concrete
- ASTM C150 Standard Specification for Portland Cement
- ASTM C260 Standard Specification for Air-Entraining Admixtures for Concrete

Table 4 TERRAZZO SYSTEM COMPARISON

	Portland Cement and Bonded Acid-Washed Terrazzo	Polyacrylate Matrix Terrazzo	Epoxy Resin Terrazzo
Required minimum system thickness	2" (51 mm)	1/2" (12.7 mm)	3/8" (9.5 mm)
Interior applications	Yes	Yes	Yes
Exterior applications	Yes	Yes	No
Acid washable for exterior slip resistance	Yes	Yes	-
Affected by moisture vapor transmission	No	No	Yes
Accommodates substrate defects	Yes	-	-
Acceptable for use over wood substrate	-	Yes	Yes
Vibrant colors achievable	No	No	Yes
Color uniformity achievable	-	-	Yes
Glass chips recommended	No	Yes	Yes
Chip size limitations	No	Yes - maximum size 2	Yes - minimum size 2
Design flexibility	No	-	Yes
Lengthy cure times	Yes	-	No

**Subfloor**

Shotblast to expose clean concrete substrate. If moisture vapor transmission rate test results exceed NTMA recommended levels, install moisture vapor transmission barrier to concrete slab per manufacturer's recommendations. Where required, install crack isolation membrane over concrete substrate at cold joints and cracks per manufacturer's instructions. Install divider strips on approved layout. Match expansion joint strips to expansion joints where required.

**Placing Terrazzo**

Prime subfloor in accordance with manufacturer's recommendations. Install terrazzo, troweling mixture into panels and leveling to tops of divider strips. Cure until topping is strong enough to prevent terrazzo strips from lifting or pulling during grinding.

Grind with No. 24 or finer grit stones, or with comparable diamond plates. Glass must be ground with finer stones. Follow initial grind with No. 80 or finer grit stones as needed to achieve the desired finish, as seen on an approved job sample.

**Grouting and Cleaning**

Clean floor with water and rinse. Remove excess rinse water and apply grout by machine or by hand, taking care to fill voids. Grout may be left on terrazzo topping until other work in project area is complete.

Grind with No. 80 or finer grit stones until all grout is removed from surface. Wash all surfaces with a neutral cleaner. Rinse with clean water and allow to dry. Apply penetrating sealer in accordance with manufacturer's

directions.

Upon completion, at least 70% of the glass or marble chips will be displayed, although some minor variation in chip density is inherent in terrazzo.

**BUILDING CODES**

Installation must comply with the requirements of all applicable local, state and federal code jurisdictions.

**6. Availability & Cost**

**AVAILABILITY**

Heritage Glass keeps thousands of pounds of aggregate in stock and normally fills orders in 3 weeks or less. Unworked post-consumer recycled glass and post-industrial recycled plate glass is also available. Orders within the United States can be placed through authorized distributors. Contact the manufacturer or distributor for more information.

**COST**

Standard unit pricing is based on 50 lb (23 kg) quantities. Super sacks of 2500 lb (1135 kg) are also available. Detailed pricing information is available from Heritage Glass, Inc.

**7. Warranty**

Heritage Glass aggregates are guaranteed for a period of 1 year from date of substantial completion. Guarantee shall be limited to the repair and/or replacement of materials found to be defective per NTMA standards and specifications. Complete warranty terms and conditions are available from Heritage Glass, Inc.

**8. Maintenance**

Standard janitorial care is required.

**9. Technical Services**

Heritage Glass, Inc., will custom blend and ship large quantities of aggregate for specific applications. Tumbling is also available for applications requiring quantities of smooth "beach glass" or river rock.

Technical assistance, including more detailed installation instructions, product literature, test results, project lists, assistance in preparing project specifications and arrangements for application supervision, is available by contacting Heritage Glass, Inc.

**10. Filing Systems**

- SmartBuilding Index
- MANU-SPEC®
- Additional product information is available from the manufacturer upon request.