

 caesarstone®



Technical Data Manual



Aerial View of Caesarstone Factory
Kibbutz Sdot Yam, Israel
Adjacent to the ancient Roman city of Caesaria

Product Description

Caesarstone® is the original engineered quartz surface. Use it as an attractive, versatile, and distinctive finish for residential, commercial and institutional buildings. Caesarstone is tough enough to withstand wear and tear on just about any interior surface, and beautiful enough for every design scheme.

Use Caesarstone for:

- Countertops and backsplashes
- Shower and tub surrounds
- Lavatory and sinks
- Interior wall cladding
- Table and desk tops
- Wainscots and wall bases
- Toilet compartment partitions
- Fireplace mantles and surrounds*
- Elevator cab walls
- Service counters
- Stair and mezzanine railing systems*



Caesarstone outperforms natural stone. It has four times more flexural strength and two times more impact resistance than granite. It exceeds the standards for marble by even greater margins. Caesarstone also provides greater consistency than ordinary stone that is veined and prone to flaws.

Ruby Reflections 7450
Aleo Dental Smile
Laguna Nigel, CA

* Some creative applications may not be covered by Caesarstone's Residential Lifetime Warranty. Please refer to your fabricator and our warranty guidelines for further details.

Because of Caesarstone's superior strength and durability, you may be able to use thinner materials to save weight, or larger pieces to reduce the number of joints. Either way, you save money with a simplified fabrication and installation process. Furthermore, Caesarstone is virtually maintenance free. Its quartz aggregate makes Caesarstone harder and more scratch resistant than either granite or marble, and its high-quality polymer binders make it non-porous and highly resistant to stains.

Caesarstone keeps its good looks without sealants or waxes and meets the stringent sanitation requirements of restaurants, hospitals, and schools.



easy incline™

Exclusive design by Dan Brunn
Blizzard 2141

Caesarstone Performance

- Beautiful and durable
- Strong, yet flexible
- Scratch resistant
- Highly stain resistant
- Resistant to many chemicals, acids and solvents
- Does not support mold or mildew
- Heat resistant

Composition Caesarstone is 93 percent crushed quartz (silicon dioxide – SiO_2), one of nature's hardest minerals. Quartz is combined with high-quality polyester resins and pigments, and then compacted under intense vibration, vacuum, and pressure into dense, non-porous slabs. The slabs are gauged to precise thickness, and polished to an enduring shine or attractive honed finish. After passing inspection, the back of each Caesarstone slab is imprinted with a zigzag trademark to simplify jobsite identification.

Colors and Styles Caesarstone offers the widest spectrum of design options in the quartz surface industry. Our styles range from fine-grained salt-and-pepper patterns to coarse-grained color blends with a variegated visual texture. See our website or contact Caesarstone for color brochures and samples.

Stocked Standards: 40 colors are available with a polished finish – 5 of them are also available in a honed (matte) finish and 1 of them is in textured finish.

Custom Colors and Textures: Available without additional charge on orders of 8,450 sq. ft. for $\frac{3}{4}$ " (2cm) or 5,640 sq. ft. for $1\frac{1}{4}$ " (3cm) thickness. (Requires additional lead-time.)

Finishes Caesarstone offers 4 distinctive surface finishes that offer added character beyond the color offering. Caesarstone can be finished on two faces by special order, requiring a minimum order quantity and additional lead-time.

Polished surfaces have a silk gloss finish with a ratio greater than or equal to 35% at 50°.

Honed is matte finish surface with the look and feel of natural stone, requiring more maintenance yet no sealants.

Textured surfaces provide a unique, matte-hammered appearance.

Motivo™ is a pattern-design application applying a patented embossed effect.

Quartz Reflections 7141
Qube Restaurant
Seattle, WA



Dimensions

Nominal Thickness: Typical Uses:

$\frac{3}{4}$ " (20mm)

Minimum recommended for countertops, partitions, and tile.

1 $\frac{1}{4}$ " (30mm)

Use when greater strength or thicker slabs are required.

Slab Size:

120 inches (3.10m) long, 56 $\frac{1}{2}$ inches (1.44m) wide.



Concrete 2003
Nova Kitchen
West Hollywood, CA

Limitations Caesarstone is recommended for interior use only.

Intense Heat: Caesarstone tolerates brief exposures to moderately hot temperatures. Trivets or hot pads should always be used.

Chemicals: Avoid contact with products containing trichloroethane or methylene chloride (such as paint removers or strippers), abrasives, alkaline levels with a pH greater than 8, hydrofluoric acid, liquid bluing, gentian violet, and aggressive cleaning compounds like oven or grill cleaners.

Acids: Caesarstone is not affected by solutions of common acids including hydrochloric, muriatic, and sulfuric acids. In concentrated solutions, after exposures of 24 hours, some acids such as nitric acid will discolor Caesarstone, though they will not compromise the strength of the material. Hydrofluoric acid spills should be cleaned immediately because it will react with quartz in Caesarstone. In the event of accidental exposure to these products, thoroughly rinse Caesarstone with clean water as soon as possible; take care to protect skin and eyes.

Bases: Sodium hydroxide and potassium hydroxide in 10% or higher concentrations will etch Caesarstone surface; spills should be cleaned from immediately. In household concentrations, such as those found in home drain cleaners, sodium and potassium hydroxide have no effect on Caesarstone.

Solvents: Caesarstone resists a wide range of commercial and industrial solvents. Household cleaners and industrial strength solutions of methyl ethyl ketone (MEK) have shown no effect on Caesarstone. Solvents that can be safely used in **pure concentrations only** on Caesarstone include:

- Acetone
- Mineral Spirits
- Methylene Chloride
- Lacquer Thinner
- Isopropyl Alcohol
- Trichloroethane

Staining Agents: Caesarstone resists common laboratory staining agents. It is not permanently stained by povidone-iodine (Betadine), potassium permanganate or tincture of iodine. Residual stains of Betadine or iodine on light-colored Caesarstone cleans off with chlorine bleach. Black and dark colors of Caesarstone show no stain from these agents. Some colors of Caesarstone can be stained by prolonged contact with solutions of gentian violet, blue ink and some lipsticks.





Environment First.™



ISO 14001:2004



Sustainable Standards and Certifications

ISO 14001 and 9001 Certification: Caesarstone is the first quartz surfacing company to receive ISO 14001 and 9001 Environmental Management Systems certification. This international standard provides a procedural framework to create policies and solutions that will assist Caesarstone reach environmental targets.

OHSAS 18001 Certification: Certifies Caesarstone as compliant with Occupational Health and Safety Management System specifications – taking a proactive approach to its occupational health and safety risks.

ANSI/NSF Standard 51 – Food Equipment Materials: Caesarstone is safe for use in food preparation areas and is easy to clean and sanitize.

GREENGUARD Indoor Air Quality and GREENGUARD Children and Schools: Certifies Caesarstone as a low-VOC (volatile organic compound) product complying with California's Department of Health Services Standard Practice (CA Section 01350) for chemical emissions from building products used in schools, offices and other sensitive environments.

USGBC: Caesarstone ranks high with the United States Green Building Council, crediting entrepreneurs and contractors using our materials with LEED points – making Caesarstone the natural partner in advanced projects, built according to green construction practices.

Sustainable Composition of Product

- 93% quartz, an abundant natural resource and by-product from mining other minerals.
- Low volatile organic compound (VOC) emissions, contributing to indoor-air quality.
- Less toxic than wood according to the UPITT standard in New York City building code.
- Continually developing recycled colors to add to our product line.

* Environmental Data is organized in accordance with GreenFormat, a format being developed by the Construction Specifications Institute for information about building product sustainability.

Environment First.™

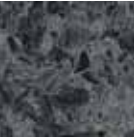







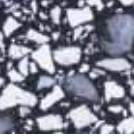





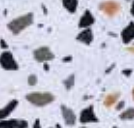



SCS Certified Products

Scientific Certification Systems (SCS) has completed the certification assessment and has approved SCS Recycled Content Certification for Caesarstone's colors.

As a global leader in independent certification and verification of environmental and sustainable stewardship, SCS has developed internationally recognized standards and certification programs in pursuit of the highest level of environmental performance and social accountability.



Color		Percentage of pre-consumer recycled content	Registration Number	Stamp
	6140 Smoky Ash	15% or more crushed green glass	SCS - MC- 02243	
	6350 Chocolate Truffle	15% or more crushed clear glass	SCS - MC- 02244	
	7141 Quartz Reflections	24% or more crushed mirror	SCS - MC- 02241	
	7450 Ruby Reflections	24% or more crushed mirror	SCS - MC- 02241	
	7150 Carbone	40% or more crushed Caesarstone remnants	SCS - MC- 02242	
	7250 Marrone	40% or more crushed Caesarstone remnants	SCS - MC- 02242	
	7080 Starry Night	24% or more crushed Caesarstone remnants	SCS - MC- 02460	
	7200 Spring Blossom	24% or more crushed Caesarstone remnants	SCS - MC- 02460	



Apple Martini 2710
project7ten
LEED Platinum Home
Venice, CA

Product Usage

Manufacturing:

- 97% of water used during manufacture is reclaimed using filtration and recycling systems.
- Regenerative thermal oxidizers remove particulate matter from the atmosphere, reducing air pollution and ensuring a safer work environment.

Regional Fabrication: Countertops and other Caesarstone products can be produced by fabricator located close to building site.

Product Lifespan: Caesarstone is a very durable material. A limited lifetime warranty is available.

Recommended Cleaning and Maintenance: Caesarstone is a very low-maintenance material. Unlike natural stone, it does not require periodic resealing for stain resistance, and its good looks can be maintained without the use of harsh cleaning chemicals. This improves indoor-air quality and the environmental impact of sealer and cleaning chemicals.

Product Reuse: The high strength of Caesarstone can make it possible to remove countertops and other installations without excessive breakage. The durability of the material then makes it possible to reuse Caesarstone in another location.

Technical Data

Test Performed	Test Standard	Results
Physical Properties		
Water Absorption	ASTM C97*	<0.05%
Density	ASTM C97* EN 14617-1*	2.2-2.4 gr/cm ³ 2.2-2.4 gr/cm ³
Flexural Strength	ASTM C880 EN 14617-2*	6,500–10,770 psi; 44.8-74.3 MPa 57.6-70 MPa
Dimension Stability	EN 14617-12*	Class A
Electrical Stability	EN 14617-13*	Volume resistance (R _v) = 0.92 x 10 ¹⁴ Ω Volume resistivity (ρ _v) = 4.88 x 10 ¹⁴ Ωm
Durability		
Impact Resistance	ASTM D1709* EN 14617-9*	26.3 lbs (117N) 4,000 - 10,000 (J)
Compressive Strength	ASTM C170* EN 14617-15*	21,312 - 27,133 psi 178.3-210.6 MPa
Abrasion	ASTM C501* ASTM C1243 EN 14617-4*	216-696 Volume of chord: V=132-244 mm ³ Groove length = 21.8 mm or V=86 mm ³
Freeze-Thaw Resistance	ASTM C1026* EN 14617-5*	No defects after 15 freeze-thaw cycles No defects after 25 freeze-thaw cycles
Mohs Hardness Scale		6.5-7
Stain, Chemical Resistance and Cleanability		
Stain Resistance**	ANSI Z124.6	Pass
Wear and Cleanability	ANSI Z124.6	Pass
Chemical Resistance	ANSI Z124.6 EN 14617-10*	Pass Class C ₄

Notes: Test reports and certifications can be viewed at www.caesarstoneus.com.

* Results represent a partial series range.

** Some models require scrubbing to remove stains.

Blizzard 2141
Dan Brunn Architecture
San Leandro, CA



Test Performed	Test Standard	Results
Thermal Properties		
Linear Thermal Expansion	ASTM D696 EN 14617-11*	-30 to +30°C: 1.3-1.9 x 10 ⁻⁵ cm/cm/°C -30 to +30°C: 2.1 x 10 ⁻⁵ (°C ⁻¹); -30 to +60°C: 2.7 x 10 ⁻⁵ (°C ⁻¹)
Thermal Conductivity	EN 12664/ISO 8301*	1.75 W/m. / °K (mean T of 10°C)
Thermal Shock	EN 14617-6*	No visual defects after 10 cycles Loss in mass = 0.02%-0.05% Loss in flexural strength = 0.7%-1.1%
Boiling Water Resistance	NEMA LD3-3.5	Pass
High Temperature Resistance	NEMA LD3-3.6	Pass

Safety			
Cigarette Test		ANSI Z124.6	Pass
Surface Burning		ASTM E84*	Class 1 and Class A
Fire Classification		EN 13501-1*	Wall cladding: B-s1-d0 Flooring and stairs: B-fl-s1
Static Coefficient of Friction		ASTM C1028*	As received — Dry: 0.8; Wet: 0.6 As renovated — Dry: 0.9; Wet: 0.6
Slip Resistance		DIN 51130* DIN 51097* EN 14231* AS/NZS 4586*	Oil wet ramp: R9-10 Wet barefoot ramp: C Wet: 13-21 SRV; Dry: 43-53 SRV Four S rubber pendulum: 25-30 BPN Wet barefoot ramp: B Oil wet ramp: R10
Radiation		ANSI/N 42.14	²²⁶ Ra = 1.4–6.8 ²³² Th = 1.4–3 ⁴⁰ K = <3–30.3 (Bq/kg dry weight)
Test Performed	Test Standard	Results	Remarks

Certifications and Approvals

ISO 14001	Environmental Management Systems	Certified by IQNet	Certificate # IL-44679
ISO 9001	Quality Systems – Model for Quality Assurance in Production, Installation, and Servicing	Certified by IQNet	Certificate # IL-29318
OHSAS 18001	Health and Safety Systems	Certified by IQNet	Certificate # IL-43226
Kosher		Certified by Rabbi Yisrael Rozen, the Zomet Institute	Certificate # 58-003-523-6
GREENGUARD	Certified for “Indoor Air Quality” and “Children and Schools”		Caesarstone is a low-emitting material.
Scientific Certification Systems (SCS)	Recycled Content	Certified by SCS	See page 11
New York City Materials and Equipment Acceptance (MEA)		Approved by City of New York	MEA 202-08-M
ANSI/NSF Standard 51	Food Equipment Materials	Listed by NSF	Safe to use in food preparation areas.

Notes: Test reports and certifications can be viewed at www.caesarstoneus.com.

* Results represent a partial series range.

** Some models require scrubbing to remove stains.

Fabrication and Installation

General

Caesarstone can be fabricated and installed in much the same manner as natural stone. A Caesarstone *Fabrication and Installation Manual* is available upon request. Standard industry references can also be consulted: The Marble Institute of America's *Dimension Stone Design Manual* provides reliable information for many types of interior stone construction, and the Tile Council of America's *Handbook for Ceramic Tile Installation* has recommendations for stone tile installation.

Shipping, Storage, and Handling

Handle Caesarstone with care to avoid breakage or damage. Transport and store in racks in the near-vertical position to prevent warping. Keep finished face toward finished face, and protect against rubbing. Store inside, away from direct exposure to sun, and between 25° and 130°F (–4° and 54°C).

Mocha 2370
Home Magazine *Settling in The City*
San Francisco, CA



Fabrication

Use of a Certified Caesarstone Fabricator is required.

Observe the following guidelines:

- Cut and polish Caesarstone with water-cooled power tools.
- Lay out materials to minimize joints and to avoid L-shaped pieces.
- Verify field measurements and inspect material for defects prior to fabrication.
- Inside corners should have $\frac{3}{8}$ inch (10mm) minimum radii to reduce potential for crack propagation.
- Substrates supporting quartz surfaces should be plumb, level, and flat to within $\frac{1}{16}$ inch in 10 feet (1.6mm in 3048mm). Supports and blocking should be securely installed.
- Provide fabricator with accurate templates showing cutouts required for installation of items installed on or penetrating through Caesarstone.

Blizzard 2141
Westfield Mall
Century City, CA

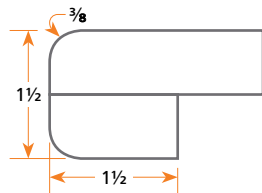




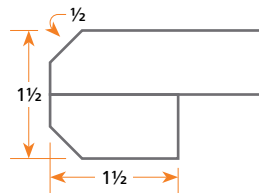
Edge Details

* More edge details are available

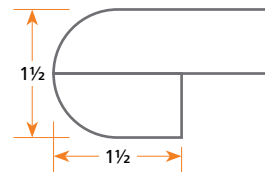
Common



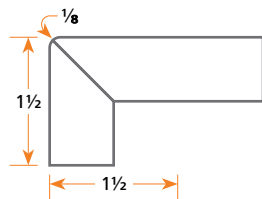
Double Radius



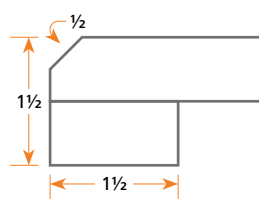
Bevel



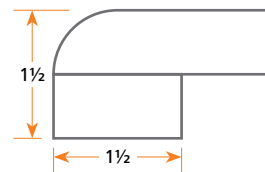
Double Bullnose



Miter Edge



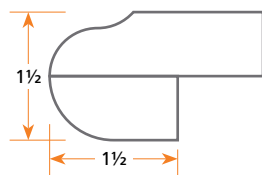
Bevel Square



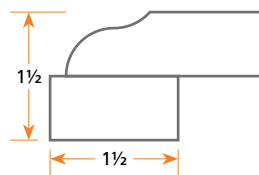
Radius



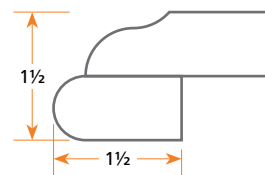
Ornate



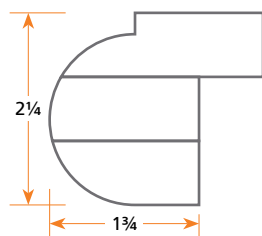
Ogee Bullnose



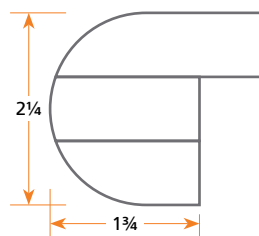
Ogee Square Step



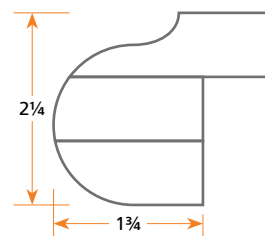
Ogee Bullnose Step



Triple Egg



Triple Bullnose



Triple Ogee

Pure White 1141
Dan Brunn Architecture
Encino, CA



Installation over Countertops

Caesarstone must be supported on a strong perimeter frame or on a full deck support of plywood that will keep it flat within 1/16" (1.6mm) per 18" (3000mm) and support the countertop weight for the useful life of the top.

- Front-to-back support within the cabinet should be provided every 24". Plan for front-to-back support strips 2.5"-wide (40mm–100mm) to coincide with cutouts and periodic support. Support must be provided under all countertop joints.
- The use of 3/4" material requires the use of a minimum 3/8" thick plywood sub top if the edge detail is 1 1/4" or greater. Some types of cabinets may require the use of 3/4" plywood for European-style frames and supports.
- Leave 1/8" (3mm) minimum clearance between the plywood and built-up edges.

NOTE: Support is required across the top of a dishwasher space and over an under-counter oven.

Supports for Overhang

As a general guideline, support is required for overhangs of Caesarstone. The following guidelines are for standard cabinets 24" in depth.

Depth of Overhang			RECOMMENDED SUPPORT
2CM (3/4")	2CM (3/4") with 5/8" sub top	3CM (1 1/4")	
<8" (200mm)	<12" (300mm)	<16" (40mm)	No additional support required
8–16" (200–400mm)	12–20" (300–500mm)	16–24" (400–600mm)	Brackets required at 24" (600mm) intervals
>16" (400mm)	>20" (500mm)	>24" (600mm)	Legs, columns or panels required at 24" (600mm) intervals

Concrete 2003
LeanArch
Los Angeles, CA





Blizzard 2141 (top)
Westfield Mall
Century City, CA

Concrete 2003 (top right)
twenty7 Design
Los Angeles, CA



Installation

A trial installation is recommended to ensure that fabricated components fit accurately and to make necessary adjustments. Allow gaps for expansion of not less than $\frac{1}{8}$ inch per 5 feet (1.6mm per 1.5m) when Caesarstone is installed between walls or other fixed conditions. Clean surfaces to receive adhesives and apply adhesives as described below. Set Caesarstone gently into position. In many conditions of use, Caesarstone should be adequately secured with 100% clear silicone adhesive only.

Adjacent pieces of Caesarstone should be tight fitting, level, and neat. Cement adjacent pieces together with high quality polyester or epoxy stone adhesives. Use products that are recommended by their manufacturers for conditions of use. Follow stone adhesive manufacturer's instructions. Stone adhesive should be tinted to match or complement the Caesarstone color. Fill joints and clamp or brace Caesarstone in position until stone adhesive sets. Seal joints between backsplashes and countertops and around tub and shower enclosures with high quality 100% silicone.

Caesarstone recommends the use of adhesives, sealants, and solvents that are compatible with sustainable construction practices.

Precautions Observe good stone working and safety practices at all times and comply with applicable building codes and regulations. While rigorous quality control is maintained in the manufacture of Caesarstone, minor variations in appearance and aggregate distribution can occur. Adjacent pieces should be from the same batch and inspected for visual compatibility before fabrication.

Availability

Stocked colors and textures are inventoried in convenient locations throughout North America. Caesarstone is also available internationally.

Costs Caesarstone is priced below the cost of many natural stones. Additional savings result from Caesarstone's strength that can simplify fabrication, reduce breakage, and allow for the use of thinner materials. Its durability and low maintenance requirements provide further lifecycle economies. Current pricing is available by contacting Caesarstone or Caesarstone distributors.





Method® Daily Granite cleansers are approved by Caesarstone for use on quartz surfaces.



Maintenance

Polished Surfaces Its hard, nonporous polished surface makes Caesarstone simple to clean. In most cases, soap and water or a mild detergent is all that is required to maintain its luster. While Caesarstone does not require sealants or waxes to maintain its luster, occasional cleansing with **Method® Daily Polish Spray** or **Method® Daily Stone Surface Wipes** will keep the quartz surface looking its best.

If required, adhered materials like food, gum and nail polish can be scraped away with a plastic putty knife; marks left by the putty knife can be removed with Soft Scrub® Gel with Bleach. Squeeze a small amount on a soft damp cloth and wipe the surface, then rinse thoroughly with clean water to remove residue.

Honed, Textured and Motivo™ Finishes Please understand that Honed, Textured and Motivo™ finishes will require more daily maintenance than our polished finishes. Since there is more exposed surface area with these finishes, metal marks, fingerprints and other signs of daily living will show on these materials. Most of these marks can be easily removed with little effort and cleaning products such as Soft Scrub® Liquid Gel with Bleach. Squeeze a small amount on a soft damp cloth and wipe the surface, then rinse thoroughly with clean water to remove residue.

By signing this document, you agree that the properties of this unique finish have been fully explained to you, and that you understand that more frequent cleaning may be required to keep the product looking new and free of marks. You also understand that while Caesarstone has a Lifetime* Warranty, this warranty covers failures caused by product defects when the material is installed by a Caesarstone Certified Fabricator. Temporary marks that are common on the honed finish are not covered by our Caesarstone warranty.

Find Out More. For further information about Caesarstone Quartz Surfaces, please visit our website at www.caesarstoneus.com.

NAME OF PURCHASER

SIGNATURE OF PURCHASER

DATE

NAME OF DEALER/FABRICATOR

SIGNATURE OF SALESPERSON

DATE



COVERED.
FOR LIFE.

Lifetime Warranty*

As of February 15, 2008 – Lifetime residential warranty and a 10-year limited commercial warranty are available for Caesarstone. Caesarstone warrants that its quartz surfacing material complies with Caesarstone's published product data.

Because Caesarstone does not have control of fabrication or installation, **Caesarstone disclaims incidental and consequential damages** and buyer's sole remedy is repair or replacement of defective material at Caesarstone's discretion.

* Some restrictions apply. Copies of our Lifetime Warranty are available at authorized dealers. Learn more by visiting www.caesarstoneus.com or calling 877.978.2798.





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Front Cover: Emma Fireplace (Blizzard 2141)

Back Cover: Dan Brunn Architecture (Caesarstone DNA)

Some photos used in this brochure include creative applications that may not be covered by Caesarstone's Residential Lifetime Warranty. Please refer to your fabricator and our warranty guidelines for further details.

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 **caesarstone®**
Quartz Surfaces