



TILE TAKEOFF & ESTIMATING ASSIGNMENT

**INDS-11315 – MATERIALS, METHODS
AND ESTIMATING**

**Katie Lawrance
Prof. Shasta Beveridge**

13 November 2021

TILE TAKEOFF & ESTIMATING ASSIGNMENT

Katie Lawrance

Part A – Specifications

Tile 1 – Field Tile

Manufacturer: Daltile

Name/Item Number: Perpetuo Glazed Ceramic Wall Tile; PT21

Shape: Rectangle, Flat

Multi-Geometric

Color: Brilliant White

Dimensions: 12" x 24"

Sq.Ft. per Carton: 10.64 sq.ft



Tile 2 – Mosaic Tile

Manufacturer: Daltile

Name/Item Number: Cascading Waters; CW45

Shape: Random Straight Stacked Mosaic 4x1, Glossy

Color: Cerulean Swell

Dimensions: 12" x 11-3/16" (Mesh Mounted)

Sq.Ft. per Carton: 8 sq.ft.



TILE TAKEOFF & ESTIMATING ASSIGNMENT

Katie Lawrance

Part A – Specifications

Tile 3 – Liner Piece

Manufacturer: Daltile

Name/Item Number: Natural Stone Marble; MO48

Shape: Pencil Rail, Glossy

Color: Stormy Mist

Dimensions: $\frac{3}{4}$ " x 12"

Sq.Ft. per Carton: N/A



Tile 4 – Shower Floor Tile

Manufacturer: Daltile

Name/Item Number: Portfolio Colorbody Porcelain; PF01

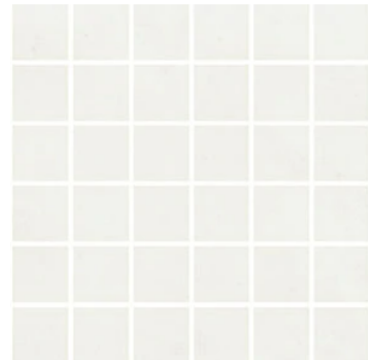
Shape: Straight Joint, 2x2 Glazed Ceramic Mosaic

Color: Ice

Dimensions: 2x2 – 12" x 24" Sheet

Sq.Ft. per Carton: 24 sq.ft.

Sheets Per Carton: 12



TILE 1

MARBLE LOOK

PERPETUO™

COLORBODY™ AND GLAZED PORCELAIN FLOOR &
GLAZED CERAMIC WALL TILE AND MOSAIC

 daltile®
IMAGINE WHAT'S POSSIBLE™

TILE 1

GLAZED CERAMIC WALL TILE – FLAT



BRILLIANT WHITE PT21



TIMELESS WHITE PT20



ELEGANT BEIGE PT22



ETERNAL GREY PT23

12 x 24 GLAZED CERAMIC WALL TILE – MULTI-GEOMETRIC



BRILLIANT WHITE PT21



TIMELESS WHITE PT20



ELEGANT BEIGE PT22



ETERNAL GREY PT23

12 x 24 GLAZED CERAMIC WALL TILE – WAVE



BRILLIANT WHITE PT21



TIMELESS WHITE PT20



ELEGANT BEIGE PT22



ETERNAL GREY PT23

1-1/2" GLAZED CERAMIC HEXAGON MOSAIC



BRILLIANT WHITE PT21



TIMELESS WHITE PT20



ELEGANT BEIGE PT22



ETERNAL GREY PT23



INFINITE BLACK PT24











PERPETUO™

COLORBODY™ AND GLAZED PORCELAIN FLOOR & GLAZED CERAMIC WALL TILE AND MOSAIC

MARBLE LOOK

TILE 1

SIZES

			Thickness	Sq. Ft./ Carton	Pieces/ Carton
	24 x 24 Floor Tile [□]	(23-7/16" x 23-7/16") (59.44 cm x 59.44 cm)	5/16"	15.20	4
	12 x 24 Floor Tile [□]	(11-5/8" x 23-7/16") (29.56 cm x 59.44 cm)	5/16"	17.01	9
	12 x 12 Floor Tile [□]	(11-5/8" x 11-5/8") (29.56 cm x 29.56 cm)	5/16"	12.22	13
	8" Hexagon Floor Tile ^{♦♦}	(7-7/8" x 9-1/8") (20.04 cm x 23.16 cm)	5/16"	9.37	25
	8" Hexagon Decorative Accent ^{♦♦}	(7-7/8" x 9-1/8") (20.04 cm x 23.16 cm)	5/16"	9.37	25
	12 x 24 Flat Wall Tile ⁺	(11-3/4" x 23-3/4") (29.90 cm x 60.42 cm)	3/8"	15.52	8
	12 x 24 Wave Wall Tile ⁺	(11-3/4" x 23-3/4") (29.90 cm x 60.42 cm)	3/8"	15.52	8
	12 x 24 Multi-Geometric Wall Tile ⁺	(11-3/4" x 23-3/4") (29.90 cm x 60.42 cm)	3/8"	15.52	8
	4 x 12 Wall Tile ^{♦♦}	(4-1/4" x 12-7/8") (10.91 cm x 32.77 cm)	5/16"	10.64	28
	1-1/2" Hexagon Mosaic (Dot-mounted) ^{♦♦}	(11-3/8" x 10-1/4" Sheet) (28.89 cm x 26.04 cm Sheet)	1/4"	9.72	12

- Available in Polished and Matte finishes only.
- ♦ Available in Matte finish only.
- ♦ Available in PT20, PT21, PT22 and PT23 only. Available in Satin finish only.
- * Pressed tile, does not feature TruEdge™ Technology.

APPLICATIONS

	Target DCOF wet	Suitable
Dry & Level – Interior Floor	N/A	✓ [†]
Wet & Level – Interior Floor	≥ 0.42	✓ ^{†*}
Shower Floors (Residential or Light Commercial)	≥ 0.42	✓ ^{**}
Exterior Floor Applications (including patios, pool decking & other wet areas with minimal footwear)	≥ 0.60	
Ramps & Inclines	≥ 0.65	
Walls/Backsplashes	N/A	✓
Countertops	N/A	✓ [†]
Pool Linings	N/A	✓ ^{**}

A DCOF value of ≥0.42 is the standard for tiles specified for level interior spaces expected to be walked upon when wet, as stated in ANSI A137.1-A326.3. For more information about DCOF and the DCOF AcuTest™, visit daltile.com/DCOF.

APPLICATION NOTES:

Floor tile suitable for exterior applications (provided it is noted as suitable in the applications chart above) in freezing and non-freezing climates, when proper installation methods are followed.

Wall and mosaic tile suitable for exterior applications (provided it is noted as suitable in the applications chart above) in non-freezing climates, when proper installation methods are followed.



[†] Floor and Mosaic tile only. * Matte finish only. ** Mosaic tile only.



All or select items within this series meet the requirements for these qualifications. For more information, visit daltile.com.



TRIM

Type	Number	Size	Pieces/Carton
 Floor Bullnose	P43F9	3 x 24	10
 Jolly [*]	S1/212J	1/2 x 12	12

* Available in PT20, PT21, PT22 and PT23 only. Available in Satin finish only.

INSTALLATION

Grout Joint Recommendation	Shade Variation
----------------------------	-----------------

Floor: 1/8" (3/16" when multiple sizes are installed in a modular pattern, and/or when installing tile with a length 15" or greater in a staggered brick-joint pattern; overlap should not exceed 33%.)

12 x 24 Wall: 1/16" (1/8" when rectangular size is installed in a staggered brick-joint pattern; overlap should not exceed 33%.)



4 x 12 Wall: 1/16" (When rectangular size is installed in a staggered brick-joint pattern, overlap should not exceed 33%.)

Mosaic: 1/8"

PERFORMANCE CHARACTERISTICS

	ASTM#	Floor Result	Wall Result	Mosaic Result
Water Absorption	C373	< 0.5%	< 20.0%	< 3.0%
Breaking Strength	C648	> 275 lbs	120-230 lbs	> 250 lbs
Scratch Hardness	MOHS	8.0 (Matte) 6.0 (Polished)	4.0 - 6.0	8.0
Chemical Resistance	C650	Resistant	Resistant	Resistant

For additional information on test results, visit us at: daltile.com/information/TestResults.

DURABILITY

Floor Surface Wear Resistance

1 Residential Bathrooms	3	All Residential / Light Commercial
2 All Residential Areas	④	All Residential / Commercial

NOTES

Since there are variations in all fired ceramic and natural products, tile and trim supplied for your particular installation may not match samples. Final confirmation should be made from actual tiles and trim prior to installation. Manufactured in accordance with ANSI A137.1 standards.

Not for use on ramps. Water, oil, grease, improper drainage and certain footwear can create slippery conditions. Floor applications expected to be exposed to these conditions require extra caution in product selection.

For additional information refer to "Factors to Consider" at: daltile.com/Factors.

Random visuals enhance the natural beauty of this product. To achieve optimal results, all tile should be selected from multiple cartons and shading and graphic arrangement planned prior to installation.

Special consideration needs to be given when installing tiles greater than 15 inches. Please refer to daltile.com/LargeTiles for more information.

Manufacturer Advisory: All tile is measured by the DCOF AcuTest™ method. Tiles with DCOF values <0.42 are not recommended for use in areas with wet or slippery conditions. For more information, see ANSI standard A137.1 section 6.2.2.1.10, available at www.tileusa.com.

Special care should be taken when grouting with dark pigmented colors. A grout release is recommended to prevent finely powdered pigments from lodging in the pores of the surface. Use of a latex modified thin-set is recommended for installation.

7834 C.F. Hawn Freeway,
Dallas, Texas 75217 | 1.800.933.TILE

To view the complete collection of
Daltile® products and information,
visit our website at daltile.com.



TILE 2

MOSAIC

DECORATIVE
CASCADING WATERS™
GLASS MOSAIC

 **dalTile®**
IMAGINE WHAT'S POSSIBLE™

TILE 2

SIZES:



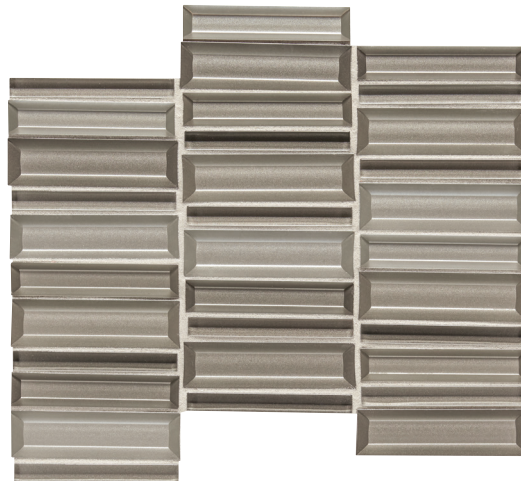
4 x Random
Straight Stacked Mosaic

FINISHES: GLOSSY

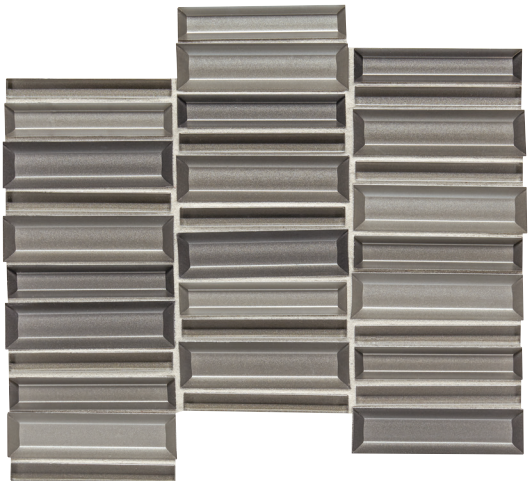
4 x RANDOM STRAIGHT STACKED MOSAIC



SHIMMER SHORE CW40



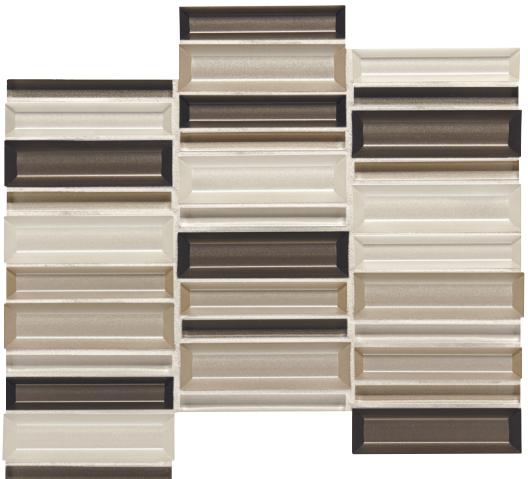
SILVER SURGE CW41



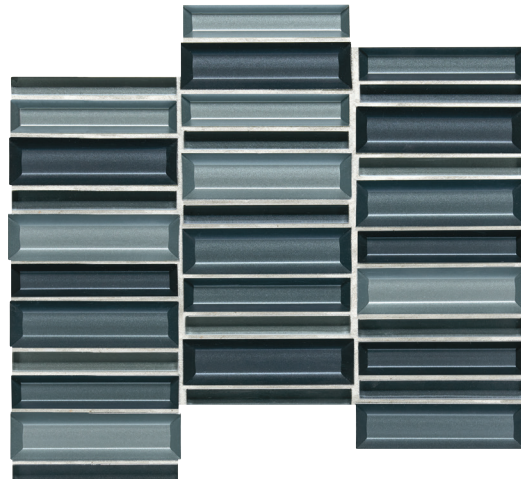
RAINWATER CW42



BROOK CREST CW43




EARTH TIDE CW44



CERULEAN SWELL CW45

SIZES

	Thickness	Sq. Ft./ Carton	Pieces/ Carton
 4 x Random Straight Stacked Mosaic (mesh-mounted)	5/16"	8.00	10
(12" x 11-3/16") (30.00 cm x 28.40 cm)			

APPLICATIONS



	Target DCOF wet	Suitable
Dry & Level – Interior Floor	N/A	
Wet & Level – Interior Floor	≥ 0.42	
Shower Floors (Residential or Light Commercial)	≥ 0.42	
Exterior Floor Applications (including pool decking & other wet areas with minimal footwear)	≥ 0.60	
Ramps & Inclines	≥ 0.65	
Walls/Backsplashes	N/A	✓
Countertops	N/A	
Pool Linings	N/A	

A DCOF value of ≥0.42 is the standard for tiles specified for level interior spaces expected to be walked upon when wet, as stated in ANSI A1371-A326.3. For more information about DCOF and the DCOF AcuTest™, visit daltile.com/DCOF.

APPLICATION NOTES:

For interior use only.

INSTALLATION

Grout Joint Recommendation	Shade Variation
Mosaic: 1/8"	 High (V3)  Random (V4)*

* CW44 and CW45 only

PERFORMANCE CHARACTERISTICS

	ASTM#	Result
Water Absorption	C373	< 0.1%
Breaking Strength	C648	> 100 lbs
Scratch Hardness	MOHS	4.0
Chemical Resistance	C650	Resistant

For additional information on test results, visit us at: daltile.com/information/TestResults.

NOTES

For additional information refer to "Factors to Consider" at: daltile.com/Factors.

Random visuals enhance the natural beauty of this product. To achieve optimal results, all tile should be selected from multiple cartons and shading and graphic arrangement planned prior to installation.

Since there are variations in all glass products, tile and trim supplied for your particular installation may not match samples. Final confirmation should be made from actual tiles and trim prior to installation. Manufactured in accordance with ANSI A137.2 standards.

Use of a white latex modified thin-set is recommended for installation.

TILE 3



CONCRETE LOOK

FLOOR

PORTFOLIO™

COLORBODY™ PORCELAIN FLOOR & GLAZED CERAMIC MOSAIC

 **daltile®**
IMAGINE WHAT'S POSSIBLE™

TILE 3

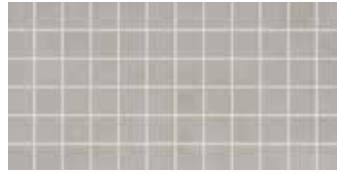
2 X 2 GLAZED CERAMIC MOSAIC



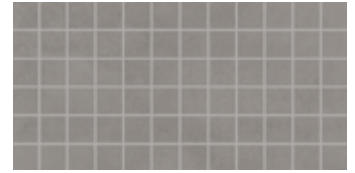
ICE PF01



WHITE PF02



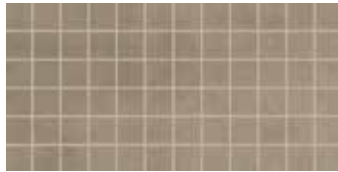
DOVE GREY PF04



ASH GREY PF05



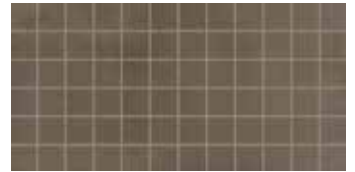
CREAM PF07



NOCE PF11



CHOCOLATE PF08



FANGO PF03



COTTO PF10



IRON GREY PF06



CHARCOAL PF09

RANDOM LINEAR PORCELAIN MOSAIC



EARTH BLEND PF14
(40% PF11 Noce, 40% PF07 Cream,
20% PF03 Fango)



SKYLINE BLEND PF12
(33% PF02 White, 33% PF05 Ash Grey,
33% PF09 Charcoal)



SEASON BLEND PF13
(40% PF11 Noce, 40% PF09 Charcoal,
20% PF08 Chocolate)

PORTFOLIO™

COLORBODY™ PORCELAIN FLOOR & GLAZED CERAMIC MOSAIC with REVEAL IMAGING®

TILE 3

SIZES

			Thickness	Sq. Ft./ Carton	Pieces/ Carton
	24 x 24 Floor Tile	(23-3/8" x 23-3/8") (59.44 cm x 59.44 cm)	5/16"	15.20	4
	12 x 24 Floor Tile	(11-5/8" x 23-3/8") (29.56 cm x 59.44 cm)	5/16"	15.12	8
	6 x 24 Floor Tile	(5-3/4" x 23-3/8") (14.63 cm x 59.44 cm)	5/16"	10.23	11
	Random Linear Mosaic* (Mesh-mounted)	(12" x 27" Sheet) (30.48 cm x 68.58 cm Sheet)	5/16"	7.60	4
	2 x 2 Mosaic (Dot-mounted)	(12" x 24" Sheet) (30.48 cm x 60.96 cm Sheet)	1/4"	24.00	12

* Available in three unique color blends only; visit daltile.com/Portfolio for more information.

APPLICATIONS

	Target DCOF wet	Suitable
Dry & Level – Interior Floor	N/A	✓
Wet & Level – Interior Floor	≥ 0.42	✓
Shower Floors (Residential or Light Commercial)	≥ 0.42	✓*
Exterior Floor Applications (including pool decking & other wet areas with minimal footwear)	≥ 0.60	
Ramps & Inclines	≥ 0.65	
Walls/Backsplashes	N/A	✓
Countertops	N/A	✓
Pool Linings	N/A	✓*

A DCOF value of ≥0.42 is the standard for tiles specified for level interior spaces expected to be walked upon when wet, as stated in ANSI A137.1-A326.3. For more information about DCOF and the DCOF AcuTest™, visit daltile.com/DCOF.

APPLICATION NOTES:

Suitable for exterior applications in freezing and non-freezing climates, when proper installation methods are followed.

2 x 2 mosaic suitable for exterior applications in non-freezing climates, when proper installation methods are followed.




* 2 x 2 mosaic tile only

PERFORMANCE CHARACTERISTICS

	ASTM#	Floor/Linear Mosaic Result	2 x 2 Mosaic Result
Water Absorption	C373	< 0.5%	< 3.0%
Breaking Strength	C648	> 275 lbs	> 250 lbs
Scratch Hardness	MOHS	8.0	8.0
Chemical Resistance	C650	Resistant	Resistant

For additional information on test results, visit us at: daltile.com/information/TestResults.

TRIM

	Type	Number	Size	Pieces/ Carton
	Bullnose	P-43C9	3 x 12	30
	Cove Base	P-36C9TB	6 x 12	22
	Cove Base Outcorner	PC-36C9TB	1 x 6	15

Cove base trim is intended to coordinate with floor tile in the standard 90-degree installation position.

Cove base and cove corner trim are suitable for non-freezing climates only.

INSTALLATION

Grout Joint Recommendation	Shade Variation
----------------------------	-----------------

Floor: 1/8" (3/16" when multiple sizes are installed in a modular pattern, and/or when installing tile with a length 15" or greater in a staggered brick-joint pattern; overlap should not exceed 33%.)



Mosaic: 1/8"

DURABILITY

Floor Surface Wear Resistance

1 Residential Bathrooms	3	All Residential / Light Commercial
2 All Residential Areas	④	All Residential / Commercial

NOTES

Since there are variations in all fired ceramic and natural products, tile and trim supplied for your particular installation may not match samples. Final confirmation should be made from actual tiles and trim prior to installation. Manufactured in accordance with ANSI A137.1 standards.

Not for use on ramps. Water, oil, grease, improper drainage and certain footwear can create slippery conditions. Floor applications expected to be exposed to these conditions require extra caution in product selection.

For additional information refer to "Factors to Consider" at: daltile.com/Factors.

Special consideration needs to be given when installing tiles greater than 15 inches. Please refer to daltile.com/LargeTiles for more information.

Special care should be taken when grouting with dark pigmented colors. A grout release is recommended to prevent finely powdered pigments from lodging in the pores of the surface. Use of a latex modified thin-set is recommended for installation.



All or select items within this series meet the requirements for these qualifications. For more information, visit daltile.com.

TILE 4

NATURAL STONE

MARBLE

 daltile®
IMAGINE WHAT'S POSSIBLE™

MARBLE

TILE 4

STORMY MIST M048



STORMY MIST M048
3" x 15" Picket Fence – Polished
3" x 15" Picket Fence – Honed



STORMY MIST M048
3/4" x 12" Pencil Rail – Honed
3/4" x 12" Pencil Rail – Polished



STORMY MIST M048
4" x 20" – Raked

STORMY MIST M048
24" x 24", 12" x 24", 12" x 12", 8" x 36" & 3" x 6" – Polished
24" x 24", 12" x 24", 12" x 12", 8" x 36" & 3" x 6" – Honed



STORMY MIST M048
Wedge Mosaic – Polished, Bush Hammered & Saw Cut
(5" x 24" Sheet)



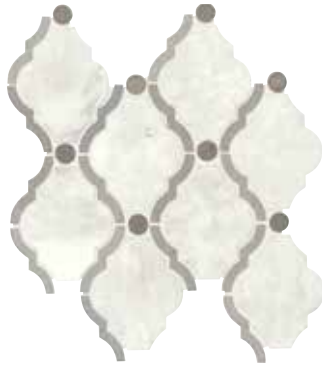
STORMY MIST M048
Ingot Mosaic – Polished
(11" x 13" Sheet)



STORMY MIST M048
2" x 4" Elongated Hex Mosaic – Honed
(12" x 12" Sheet)



ARGYLE BLEND GRAY DA23
Argyle Blend Mosaic – Polished
(11-1/2" x 12" Sheet)



STORMY MIST BLEND DA26
Framed Baroque Mosaic – Polished
(14" x 12" Sheet)



LUMIA LEAF GRAY DA31
Lumia Leaf Mosaic – Polished
(13" x 10" Sheet)

STONE RIVER M315



STONE RIVER M315
12" x 24" & 8" x 36" (Vein-cut) – Polished*

*Refer to the pattern guide on the last page.
*All sizes are sold separately.

Features

- Round, perforated strainer shower drain.
- For use with acrylic, fiberglass, cast iron or Vikrell® shower bases.

Material

- Solid-brass construction for durability and reliability.

Installation

- For use with 2" metal or plastic pipe; includes 2" plastic pipe gasket/bushing.

Recommended Products/Accessories

- K-23726 Drain treatment
- K-23723 Faucet cleaner



Codes/Standards

ASME A112.18.2/CSA B125.2

KOHLER® One-Year Limited Warranty

See website for detailed warranty information.

Available Colors/Finishes

Color tiles intended for reference only.

Color	Code	Description
	CP	Polished Chrome
	SN	Vibrant® Polished Nickel
	AF	Vibrant® French Gold
	PB	Vibrant® Polished Brass
	BGD	Vibrant® Moderne Brushed Gold
	G	Brushed Chrome
	BN	Vibrant® Brushed Nickel
	BV	Vibrant® Brushed Bronze
	2BZ	Oil-Rubbed Bronze
	BL	Matte Black
	2MB	Vibrant® Brushed Moderne Brass
	AU	Polished Gold
	TT	Vibrant Titanium
	VNT	Vintage Nickel

Features

- Includes faceplate with handle.
- Single handle controls both on/off activation and temperature settings.
- Complements Purist faucets and accessories.

Material

- Premium material construction with metal handle ensures reliability and durability.
- KOHLER finishes resist corrosion and tarnishing.

Installation

- Trim only; requires valve to complete installation (sold separately).

Required Products/Accessories

K-304/K-P304 Series Rite-Temp® Valves

or

K-8304/K-P8304 Series Rite-Temp® Valve & Cartridge Kits

or

K-8300/K-P8300 Series Rite-Temp® Valve Body Rough-ins

K-8305/K-P8305 Series Rite-Temp® Cartridges

or

K-2971-KS 3/4" Pressure-balancing Valve

Recommended Products/Accessories

K-23723 Faucet cleaner

Optional Products/Accessories

K-10350 Deep rough-in kit

K-10351 Test cap for K-8300 Series valve bodies



ADA

CSA B651

OBC

Codes/Standards

ASME A112.18.1/CSA B125.1

ADA

ICC/ANSI A117.1

CSA B651









OBC

KOHLER® Faucet Lifetime Limited Warranty

See website for detailed warranty information.

Available Colors/Finishes

Color tiles intended for reference only.

Color	Code	Description
	CP	Polished Chrome
	SN	Vibrant® Polished Nickel
	BGD	Vibrant® Moderne Brushed Gold
	BN	Vibrant® Brushed Nickel
	BV	Vibrant® Brushed Bronze
	BL	Matte Black
	2MB	Vibrant® Brushed Moderne Brass
	RGD	Vibrant Rose Gold
	VHR	

Features

- Advanced spray engine provides three alternate experiences: wide coverage, intense drenching, and targeted spray.
- Wide coverage spray produces an encompassing spray for everyday use.
- Intense drenching spray delivers a forceful spray ideal for rinsing shampoo from hair.
- Targeted spray is a focused stream for targeting sore muscles or use as a utility spray.
- Simple thumb tab smoothly transitions between sprays.
- MasterClean™ sprayface features an easy-to-clean surface that withstands mineral buildup.
- 2.0 gpm (gallons per minute) showerhead and handshower flow rate.
- Slidebar bracket allows you to adjust height and angle of handshower.
- Diverter at the base of the column makes for easy toggling between handshower and showerhead.

Installation

- Wall-mount.
- For use in shower-only installations.
- Installs in less than 60 minutes without changes to in-wall plumbing (subject to condition of existing installation).
- May require additional service parts based on installation type (see installation guide for details).
- Includes an adapter that will fit with most installations but may require K-1194630, K-1187917 or K-1194302.

Recommended Products/Accessories

K-23723 Faucet cleaner

Included Components

Product consists of:

K-72415 Multifunction Handshower
K-45982 60" ribbon hose
K-45906 Shower column
K-72419 Multifunction Showerhead



ADA

OBC

Codes/Standards



ASME A112.18.1/CSA B125.1
DOE - Energy Policy Act 1992
ADA
ICC/ANSI A117.1
OBC

KOHLER® Faucet Lifetime Limited Warranty

See website for detailed warranty information.

Available Colors/Finishes

Color tiles intended for reference only.

Color	Code	Description
	CP	Polished Chrome
	BN	Vibrant® Brushed Nickel
	BL	Matte Black

KOHLER® Faucets 12" rainhead with Katalyst® air-induction technology, 2.5 gpm K-13690

Features

- Single-function rainhead.
- MasterClean™ sprayface features an easy-to-clean surface that withstands mineral buildup.
- Optimized sprayface for maximum performance.
- 2.5 gpm (9.5 lpm) maximum flow rate.

Material

- Solid-brass construction for durability and reliability.

Technology

- Katalyst® air-induction technology infuses water with air, creating bigger drops for a more powerful spray.

Installation

- 1/2 -14 NPT connection.

Recommended Products/Accessories

K-23723 Faucet cleaner

Optional Products/Accessories

K-7394 6" ceiling-mount single-function rainhead arm & flange



Codes/Standards

ASME A112.18.1/CSA B125.1









DOE - Energy Policy Act 1992

KOHLER® Faucet Lifetime Limited Warranty

See website for detailed warranty information.

Available Colors/Finishes

Color tiles intended for reference only.

Color	Code	Description
	CP	Polished Chrome
	SN	Vibrant® Polished Nickel
	PGD	Vibrant® Moderne Polished Gold
	BGD	Vibrant® Moderne Brushed Gold
	BN	Vibrant® Brushed Nickel
	BV	Vibrant® Brushed Bronze
	BL	Matte Black
	2MB	Vibrant® Brushed Moderne Brass

1-800-4KOHLER (1-800-456-4537)

Kohler Co. reserves the right to make revisions without notice to product specifications.

For the most current Specification Sheet, go to www.kohler.com.

10-13-2021 10:23 - US/CA/MX

THE BOLD LOOK
OF **KOHLER**®

KOHLER® Faucets 6" ceiling-mount single-function rainhead arm & flange **K-7394**

Features

- ½" NPT connection.
- For use with overhead rainheads.
- 6" (152 mm) shower arm.

Material

- Brass.
- KOHLER finishes resist corrosion and tarnishing.

Installation

- Ceiling-mount.

Recommended Products/Accessories

K-23723 Faucet cleaner



Codes/Standards

None Applicable

KOHLER® Faucet Lifetime Limited Warranty

See website for detailed warranty information.

Available Colors/Finishes

Color tiles intended for reference only.

Color	Code	Description
	CP	Polished Chrome
	SN	Vibrant® Polished Nickel
	AF	Vibrant® French Gold
	PB	Vibrant® Polished Brass
	BGD	Vibrant® Moderne Brushed Gold
	BN	Vibrant® Brushed Nickel
	BV	Vibrant® Brushed Bronze
	BRZ	Oil-Rubbed Bronze
	2BZ	Oil-Rubbed Bronze
	BL	Matte Black
	2MB	Vibrant® Brushed Moderne Brass
	RGD	Vibrant Rose Gold
	TT	Vibrant Titanium
	VNT	Vintage Nickel
	VHR	

1-800-4KOHLER (1-800-456-4537)

Kohler Co. reserves the right to make revisions without notice to product specifications.

For the most current Specification Sheet, go to www.kohler.com.

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THE BOLD LOOK
OF **KOHLER**®

Features

- Contemporary towel bar and knob combination offers storage on the outside of the door without encroaching on the bathing space.
- CleanCoat®+ glass coating creates a hydrophobic barrier that repels water, soap scum, and residue, saving time and protecting shower doors 10 times longer than original CleanCoat. (Based on 2021 internal wear/abrasion testing using a microfiber cloth.)

Technology

- Frameless, 5/16" (8 mm) thick Frosted tempered glass door.
- Taller, 76" (1930 mm) door height better showcases the space for taller shower applications.
- Center-guided mechanism for smooth, quiet sliding action and easy cleaning.
- Frameless design with minimal metal allows for greater ease of cleaning.
- Low bottom track creates easy entry and exit to the bathing space.

Installation

- Out-of-plumb adjustability simplifies installation.
- Sliding shower door.
- Not for use in hospitality.
- For residential use only.

Recommended Products/Accessories

K-23723 Faucet cleaner

Included Components

Additional Components:
Hardware kit



Codes/Standards

ANSI Z97.1




CPSC 16CFR 1201

KOHLER® One-Year Limited Warranty

See website for detailed warranty information.

Available Colors/Finishes

Color tiles intended for reference only.

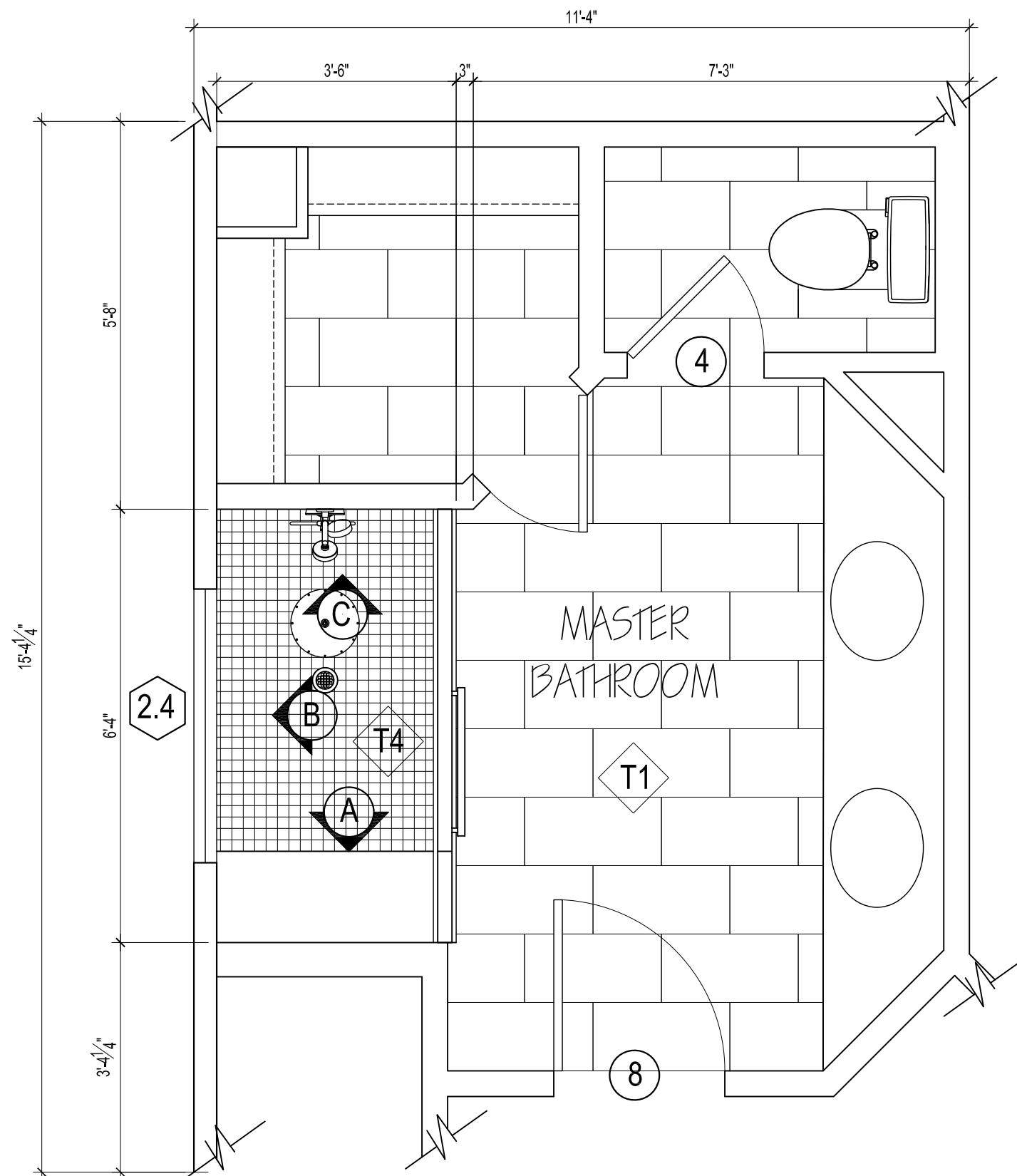
Color	Code	Description
	SHP	Bright Polished Silver
	ABZ	Anodized Dark Bronze
	BNK	Anodized Brushed Nickel

Available Glass Options

Code	Description
------	-------------

D3	Frosted
----	---------

SPENCER RESIDENCE - TILE



SPENCER SHOWER FLOOR PLAN
SCALE: $\frac{1}{2}$ " = 1'-0"

FINISH SCHEDULE

- T1
 Daltile
 Perpetuo Glazed Ceramic Wall Tile
 PT21
 Brilliant White Rectangle, Flat
- T2
 Daltile
 Cascading Waters Mosaic
 CW45
 Cerulean Swell Random Straight Stacked Mosaic, Glossy
- T3
 Daltile
 Natural Stone Marble
 MO48
 Stormy Mist Pencil Rail, Glossy
- T4
 Daltile
 Portfolio Glazed Ceramic Mosaic
 PF01
 Ice 2x2 Mosaic

PROJECT

SPENCER RESIDENCE

MATERIALS, METHODS & ESTIMATING

INDS 1315

REVISIONS:

4		
3		
2		
1		

DATE:

DRAFTED BY:

KATIE
LAWRANCE

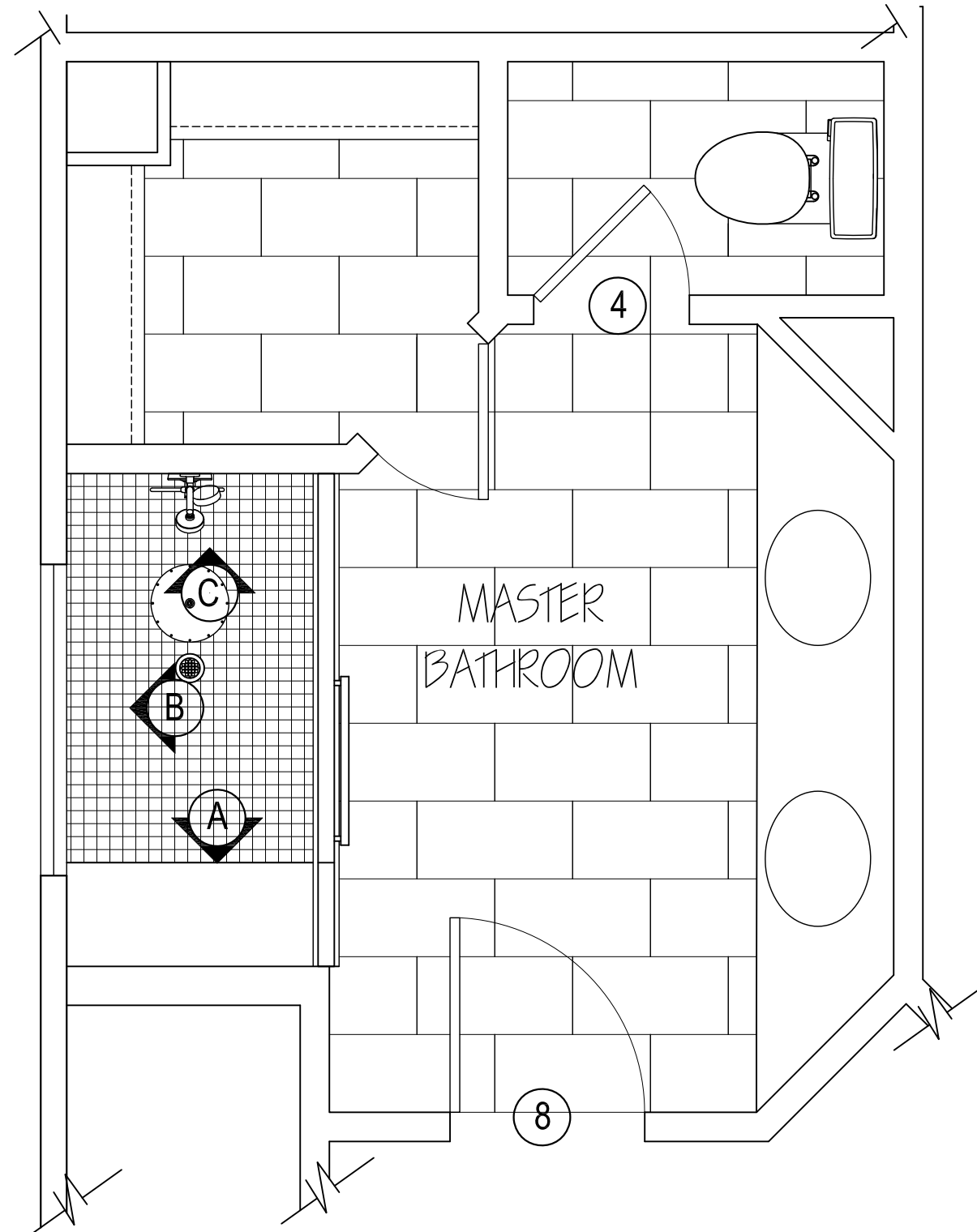
SHEET CONTENTS:

FLOORPLAN

SHEET:

10 01

SPENCER RESIDENCE - TILE



SPENCER SHOWER FLOOR PLAN
SCALE: $\frac{1}{2}$ " = 1'-0"

FINISH SCHEDULE

- T1**
 Daltilo
 Perpetuo Glazed Ceramic Wall Tile
 PT21
 Brilliant White Rectangle, Flat
- T2**
 Daltilo
 Cascading Waters Mosaic
 CW45
 Cerulean Swell Random Straight Stacked Mosaic, Glossy
- T3**
 Daltilo
 Natural Stone Marble
 MO48
 Stormy Mist Pencil Rail, Glossy
- T4**
 Daltilo
 Portfolio Glazed Ceramic Mosaic
 PF01
 Ice 2x2 Mosaic

PROJECT

SPENCER RESIDENCE

MATERIALS, METHODS & ESTIMATING

INDS 1315

REVISIONS:

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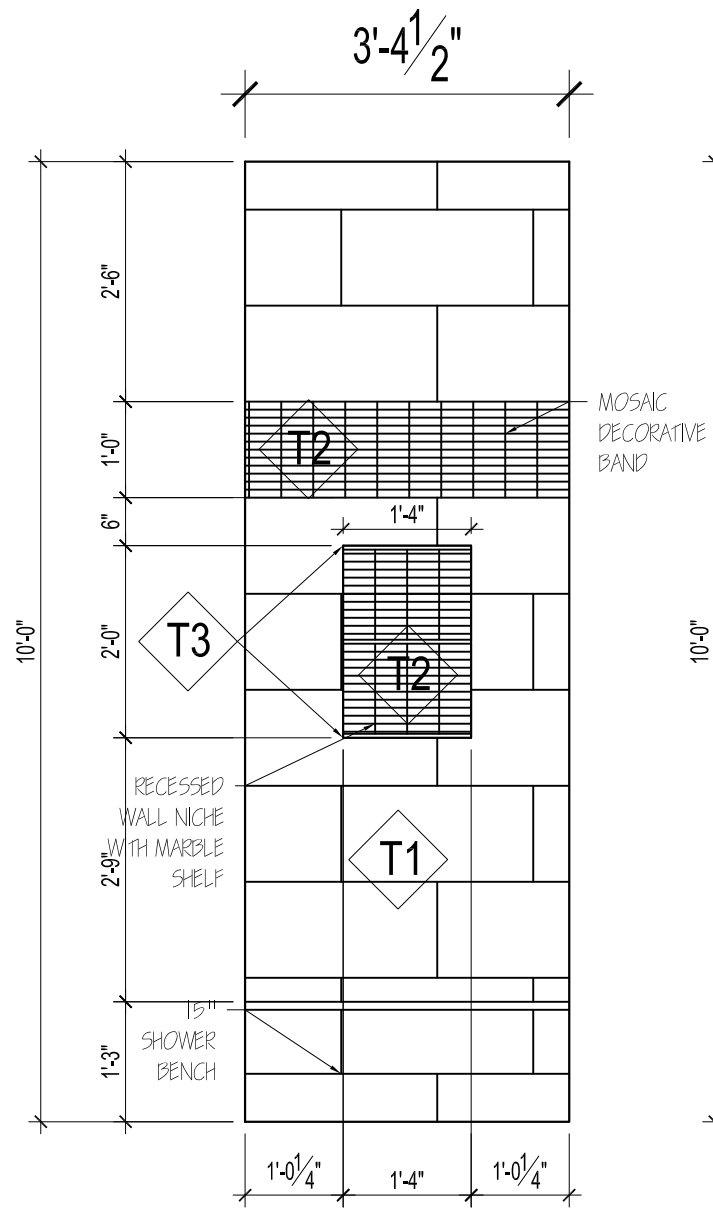
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DRAFTED BY:
KATIE
LAWRANCE

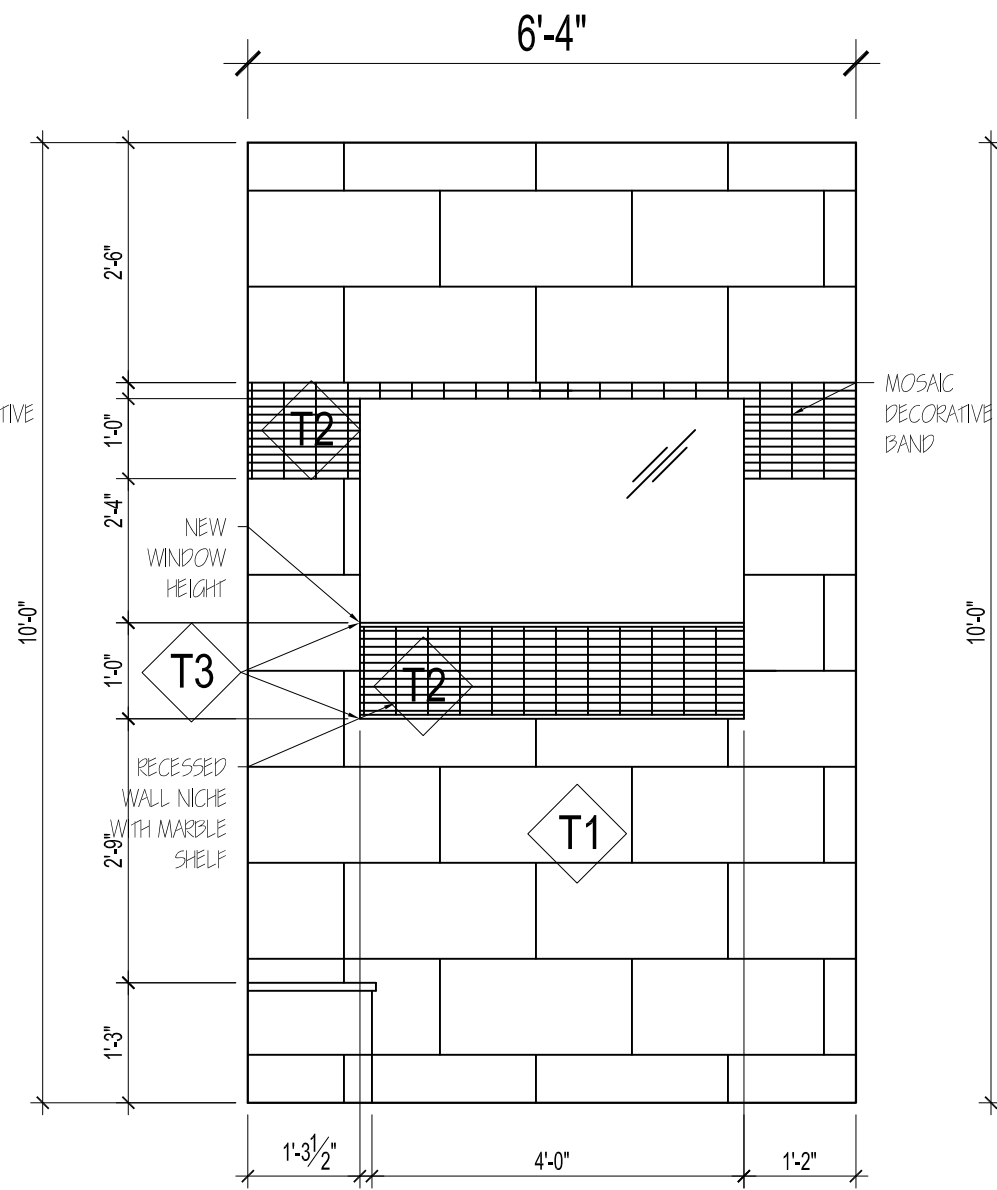
SHEET CONTENTS:
FLOORPLAN

SHEET:

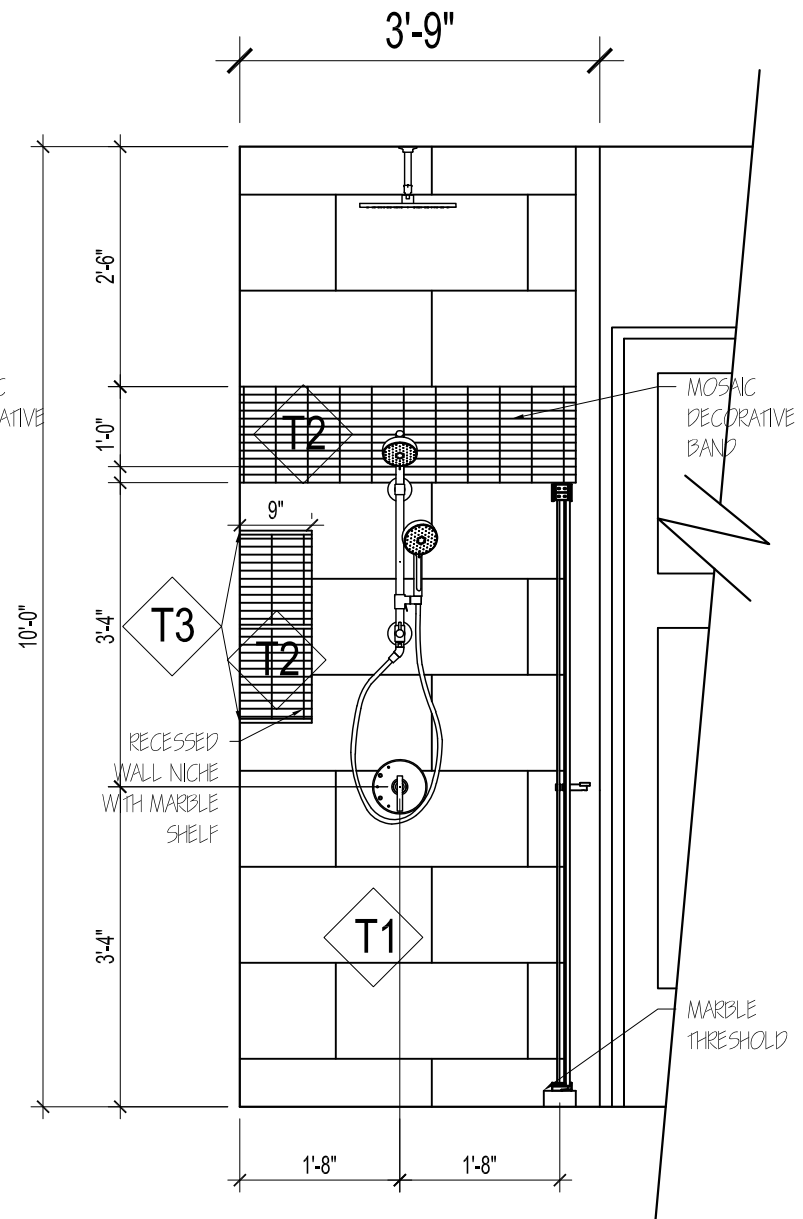
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A SOUTH SHOWER ELEVATION
SCALE: $\frac{1}{2}'' = 1'-0''$



B WEST SHOWER ELEVATION
SCALE: $\frac{1}{2}'' = 1'-0''$



C NORTH SHOWER ELEVATION
SCALE: $\frac{1}{2}'' = 1'-0''$

PROJECT

SPENCER RESIDENCE

MATERIALS, METHODS & ESTIMATING

INDS 1315

REVISIONS:

4		
3		
2		
1		

DATE:

DRAFTED BY:
KATIE
LAWRANCE

SHEET CONTENTS:
ELEVATIONS

SHEET:

10 01

TILE TAKEOFF & ESTIMATING ASSIGNMENT

Katie Lawrance

Part B – Calculations

Tile 1: Field Tile

Step 1: Total Square Footage Needed for Tile

Wall A: 33.75 sq.ft.

Wall B: 63.3333 sq.ft.

Wall C: 34.7917 sq.ft.

Total sq.ft. Needed for T1: 131.8747 sq.ft.

Step 2: Number of Cartons Needed for Tile

Total from Step 1: 131.8747 sq.ft.

Sq.Ft. per Carton: \div 10.64 sq.ft

Number of Cartons Needed: 12.39

Full Number of Cartons Needed for T1: 13

Tile 2: Mosaic Tile

Step 1: Total Square Footage Needed for Tile

Wall A: 6.0417 sq.ft.

Wall B: 10.3333 sq.ft.

Wall C: 5 sq.ft.

Total sq.ft. Needed for T2: 21.375 sq.ft.

Step 2: Number of Cartons Needed for Tile

Total from Step 1: 21.375 sq.ft.

Sq.Ft. per Carton: \div 8 sq.ft

Number of Cartons Needed: 2.6719

Full Number of Cartons Needed for T2: 3

TILE TAKEOFF & ESTIMATING ASSIGNMENT

Katie Lawrance

Part B – Calculations

Tile 3: Liner Piece

Step 1: Total Linear Footage Needed for Piece

Wall A: 2'-8"

Wall B: 8'

Wall C: 1'-6"

Total Linear Footage Needed for T3: 12'-2"

Step 2: Number of Cartons Needed for Tile

Total from Step 1: 12'-2"

Length of Single Piece: ÷ 12"

Number of Pieces Needed: 12.1667

Full Number of Pieces Needed for T3: 13

Tile 4: Shower Floor Tile

Step 1: Total Square Footage Needed for Tile

Shower Floor: 15.8333

Total sq.ft. Needed for T4: 15.8333 sq.ft.

Step 2: Number of Cartons Needed for Tile

Total from Step 1: 15.8333 sq.ft.

Sq.Ft. per Sheet: ÷ 2 sq.ft

Full Number of Sheets Needed: 8

Full Number of Cartons Needed for T4: 1



May contain Recycled
and/or Reclaimed Materials
www.daltile.com/leed

SAFETY DATA SHEET

NATURAL STONE PRODUCTS

TILE 3

Product Series:

Marble Collection-M701 Carrera White

1. PRODUCT IDENTIFICATION

Common Name: Natural Stone Products (For purposes of this SDS, the term “Natural Stone” encompasses all types of Stone products sourced by Dal-Tile Corporation.)

Synonyms: Natural Stone Products and Wares

Manufacturer Name: Dal-Tile Corporation

Address: Headquarters Office
7834 C.F. Hawn Freeway, Dallas, TX 75217

Emergency Assistance: Environmental, Health and Safety Department
Industrial Hygiene Manager - (214) 309-4295
1-800-933-TILE; (214) 398-1411 (24-hour number)

Recommended Use: Building Material - Natural Stone products sourced by Dal-Tile Corporation are natural building materials typically used as floor/wall and countertop coverings. Should you desire additional information, please direct your inquiry to the address above.

This document has been prepared in accordance with the Occupational Safety and Health Administration (OSHA) Hazard Communication standard, 29 Code of Federal Regulations (CFR) 1910.1200(g), Safety Data Sheets.

2. HAZARDS IDENTIFICATION

Natural Stone products are mixtures of Quartz, Feldspar, and other natural occurring minerals that have been mined. The finished, Natural Stone products are odorless, stable, non-flammable, and pose no immediate hazard to health. Respiratory, hand and eye protection may be needed to prevent excess exposure to airborne particulates if dust is produced by cutting product during installation or if dust is produced by any other operations, including demolition/removal projects.

Emergency Overview: Danger! Lung injury and Cancer Hazard

GHS Classification (Global Harmonized Standard Classification):

Carcinogenicity Category 1A (H350)

Specific target organ toxicity, single exposure; Respiratory tract irritation - Category 3 (H335)

Specific target organ toxicity, repeated exposure - Category 1A (H372)

GHS Label, Hazards and Precautionary Statements

GHS Pictogram:

Crystalline Silica:  Category 3 (Respiratory tract irritation) (H335)



Categories 1A(Carcinogenicity)(H372)

Label Signal Word: Danger

Hazard Statements:

(H350) May cause CANCER (inhalation)

(H335) May cause respiratory irritation

(H372) Causes damage to organs (lung/respiratory) through prolonged or repeated exposure (inhalation)

2. HAZARDS IDENTIFICATION (CONT)

Precautionary Statements:

- Do not handle until all safety precautions have been read and understood. (P202)
- Do not breathe dust/spray. (P260 + P261)
- Wash skin thoroughly after handling. (P264)
- Do not eat, drink or smoke when using this product. (P270)
- Wear protective gloves, protective clothing, eye protection, face protection. (P280)

Potential Health Effects:

Inhalation: Do not breathe dust. See "Health Hazards" in Section 11 for more details.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Natural Stone products are composed of Quartz, Feldspar and other naturally-occurring minerals, that have been mined.

Natural Stone Products are mined and fabricated into various shapes, sizes, and colors.

These products do not contain asbestos.

Under normal conditions these products do not release hazardous materials after installation and are not considered hazardous waste should disposal be necessary.

Composition	CAS# / EINECS#	Estimated % by Wt.	EU Class
Marble	CAS: 471-34-1 EINECS: 207-439-9	0-99	(67/548/EEC) Xi R36/37/38
Crystalline silica as quartz	CAS: 14808-60-7 EINECS: 238-878-4	0-1	(67/548/EEC) Xn R48/20
Feldspar	CAS: 68476-25-5 EINECS: 270-666-7	0-15	(67/548/EEC) Non Haz. (by Directive)
Biotite	CAS: 12001-26-2 EINECS: 215-479-3	0-5	(67/548/EEC) Xi R36/37/38
Iron Oxide	CAS: 1345-25-1 EINECS: 215-721-8	0-2	(67/548/EEC) Xi R36/37/38

4. FIRST AID MEASURES

- Eyes: Immediately flush eyes with large amounts of water for at least 15 minutes if dust gets in eyes. Get medical attention if irritation persists.
- Skin: Wash thoroughly after working with Natural Stone products.
- Inhalation: Remove to fresh air if exposed to large amounts of dust. Administer artificial respiration if breathing has stopped. Keep victim at rest. Call for prompt medical attention.
- Ingestion: Not applicable for intact natural stone products.

Have emergency eyewash station available in area where products are cut.

5. FIRE-FIGHTING MEASURES AND INFORMATION

- Flash Point (Method Used): Not applicable
- Autoignition Temperature: Not applicable
- Flammable Limits (% by Volume in Air): LEL - not applicable
UEL - not applicable
- Fire Extinguishing Media: None required Non-flammable
- Special Fire Fighting Procedures: None required
- Fire and Explosion Hazards: None

6. ACCIDENTAL RELEASE MEASURES

Avoid creating excessive dust. Clean up dust with a vacuum system with a High-efficiency particulate (HEPA) air filter vacuum or damp sweeping. See Section 8 of this SDS concerning PPE information for clean-up.

7. HANDLING AND STORAGE

When cutting, grinding or removing, use equipment with integral dust collection and/or use local exhaust ventilation. Use wet cutting methods to reduce generation of dust. Use respiratory protection in the absence of effective engineering controls.

Do not store near acids. If natural stone products contact some acids, damage/discoloration to the surface may occur.

Shelf life is unlimited.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Exposure Table

Composition	OSHA PEL	NIOSH IDLH	ACGIH TLV*	Units
Crystalline silica as quartz -respirable fraction	10 %SiO ₂ +2	0.05	0.025	mg/m ³
-total dust	30 %SiO ₂ +2	N.E.	N.E.	mg/m ³
Limestone -respirable fraction	5	5	5	mg/m ³
-total dust**	15	10	10	mg/m ³
Feldspar -respirable fraction	N.E.	N.E.	N.E.	mg/m ³
-total dust**	15	N.E.	N.E.	mg/m ³
Biotite -respirable fraction**	5	15	3	mg/m ³
-total dust**	15	N.E.	N.E.	mg/m ³
Iron Oxide -respirable fraction	10	5	5	mg/m ³

* 2006 Edition, respirable fraction to be determined as per Appendix D of ACGIH TLV.

** Covered as particles not otherwise regulated per OSHA and particles not otherwise classified per ACGIH.

N.E. - Not established

8.2 EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation: Use adequate ventilation to keep exposure to dust below recommended exposure levels. Avoid inhalation of dust. The highest probability of silica exposure occurs during installation using dry cutting methods or during removal of installed natural stone tile. Wet cutting methods are recommended.

Respiratory Protection: Use of a properly fitted NIOSH/MSHA approved particulate respirator is recommended when cutting natural stone products for installation or during the removal of installed product.

Eye Protection: Use dust-proof goggles or safety glasses with side shields. Contact lenses may absorb irritants. Do not wear contact lenses in work areas.

Skin Protection: Cotton or leather work gloves should be worn when cutting this product to minimize skin exposure to dust and/or cuts. Wash hands prior to eating, drinking, or smoking, and at the end of the work shift, after cutting operations are conducted.

NOTE: Personal protection information in Section 8 is based on general information for normal uses and conditions. Where special or unusual uses or conditions exist, it is suggested that the assistance of an industrial hygienist or other qualified professional be obtained.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Brittle solid; color may vary
Odor:	Odorless
Melting Point:	Not Available (>1000 °F)
Boiling Point:	Not applicable
Vapor Pressure:	Not applicable
Vapor Density (Air = 1):	Not applicable
Solubility in Water:	Insoluble
Specific Gravity (H ₂ O = 1):	1.6 to 2.6
Percent Volatile by Volume:	Not applicable
Evaporation Rate (Ethyl Ether = 1):	Not applicable
Viscosity:	Not applicable

10. STABILITY AND REACTIVITY

Stability:	Stable in current form.
Conditions to Avoid:	Avoid contact with acids (e.g., Hydrochloric, acetic, hydrofluoric, etc.)
Incompatibility (Materials to Avoid):	Avoid contact with acids (e.g., Hydrochloric, acetic, hydrofluoric, etc.)
Hazardous Polymerization:	Will not occur.
Hazardous Decomposition Products:	None.

11. TOXICOLOGICAL INFORMATION

Potential Health Effects

Primary Routes of Exposure

None for intact natural stone products. Inhalation and potential exposure to eyes, hands, or other body parts if contact is made with broken tile, and/or during procedures involving the cutting of products, and/or for operations involving the removal of installed products.

Acute Effects

No acute effects from exposure to intact natural stone products are known. Working with broken or cut natural stone produces a potential for cuts to the hands and exposed body parts. Acute effects such as eye irritation may occur if associated with high dust operations such as dry cutting or during the removal of installed product. In very rare cases, symptoms of acute silicosis, a form of silicosis (a nodular pulmonary fibrosis) associated with exposure to respirable crystalline silica, may develop following acute exposure to extremely dusty environments caused by generation of tile dust. Signs such as labored breathing and early fatigue may indicate silicosis; however, these same symptoms can arise from many other causes.

Chronic Effects

No chronic effects are known for exposure to intact natural stone products. Long-term, continual exposure to respirable crystalline silica at or above established permissible occupational exposure limits may lead to the development of silicosis, a nodular pulmonary fibrosis (NPF). NPFs are also associated with pulmonary tuberculosis, bronchitis, emphysema, and other airway diseases. This type of chronic exposure to silica dust may also result in the development of autoimmune disorders, chronic renal disease, and other adverse health effects.

Recent epidemiologic studies demonstrate that workers exposed to elevated silica concentrations have a significant risk of developing chronic silicosis. Signs such as labored breathing and early fatigue may indicate silicosis; however, these same symptoms can also arise from many other causes.

Potential Adverse Interactions

Silicosis may be complicated by severe mycobacterial or fungal infections and result in tuberculosis (TB). Epidemiologic studies have established that silicosis is a risk factor for developing TB. Any existing respiratory or pulmonary diseases may be complicated by exposure to respirable crystalline silica. Smoking may increase the risk of adverse effects if done in conjunction with occupational exposure to silica dust at or above permissible exposure limits.

Carcinogen Status

Respirable crystalline silica is classified by the International Agency for Research on Cancer (IARC) as a Group I Carcinogen (carcinogenic to humans). The National Toxicology Program (9th Report) lists respirable crystalline silica as "Known to be a Human Carcinogen". USDOL/OSHA and NIOSH have recommended that crystalline silica be considered a potential occupational carcinogen.

Overview of Animal Testing

Short term experimental studies of rats have found that intratracheal instillation of quartz particles leads to the formation of discrete silicotic nodules in rats, mice and hamsters.

11. TOXICOLOGICAL INFORMATION (CONT.)**Oral (silica) Lethality**

LD50 Rat oral >22,500 mg/kg

LD50 Mouse oral >15,000 mg/kg

LC50 Carp >10,000 mg/l (per 72 hr.)

12. ECOLOGICAL INFORMATION

No information available at this time.

13. DISPOSAL CONSIDERATIONS

Waste should be disposed of in a landfill certified to accept such materials in accordance with federal, state, and local regulations.

14. TRANSPORTATION INFORMATION

D.O.T Shipping Name:	Not applicable
Hazard Class:	Non-regulated (for disposal purposes material is non-hazardous Class III regulated material)
ID Number:	Not applicable
Marking:	Not applicable
Label:	None
Placard:	None
Hazardous Substance/RQ:	Not applicable
Shipping Description:	Natural Stone/Granite products
Packaging References:	None

15. REGULATORY INFORMATION

This product and/or its components have been previously introduced into U.S. commerce and is listed in the Toxic Substances Control Act (TSCA) Inventory of Chemicals in Commerce. Hence, it is subject to all applicable provisions and restrictions under TSCA 40 CFR Section 721 and 723.250.

This natural stone tile contains <1 percent by weight each of the following elements, which are SARA 313 Recordable: Antimony, Arsenic, Barium, Beryllium, Cadmium, Cobalt, Chromium, Copper, Manganese, Mercury, Nickel, Lead, Silver, Thallium, Tin, Titanium, Vanadium, and Zinc.

Title 22 Division 2, California Code of Regulation Chapter 3 (Proposition 65): This product has been evaluated for exposure levels and results conclude use of this product does not create an exposure to chemical(s) which is(are) known to the State of California to cause cancer, birth defects or other reproductive harm.

This product or its components meets the following hazard definition(s) as defined by the Occupational Safety and Health Hazard Communication Standard (29 CFR Section 1910.1200):

<input type="checkbox"/> Combustible Liquid	<input type="checkbox"/> Flammable Aerosol	<input type="checkbox"/> Oxidizer
<input type="checkbox"/> Compressed Gas	<input type="checkbox"/> Explosive	<input type="checkbox"/> Pyrophoric
<input type="checkbox"/> Flammable Gas	<input checked="" type="checkbox"/> Health Hazard (Sections 3 & 11)	<input type="checkbox"/> Unstable
<input type="checkbox"/> Flammable Liquid	<input type="checkbox"/> Organic Peroxide	<input type="checkbox"/> Water Reactive
<input type="checkbox"/> Flammable Solid		

Based on information presently available, this product does not meet any of the hazard definitions of 29 CFR Section 1910.1200.

Note: The information in this data sheet provides information related to the potential hazards associated with dusts which may be produced during cutting or otherwise changing the shape of the product during installation and/or removal.

16. ADDITIONAL INFORMATION

Global Harmonization Identification System

GHIS: Health: 3 Fire: 4 Reactivity: 4

Hazardous Material Identification System

HMIS: Health: 0 Fire: 0 Reactivity: 0

National Fire Protection Association



SAFETY DATA SHEET

CERAMIC TILE

TILE 4

Tile Series: **Portfolio**

1. PRODUCT IDENTIFICATION

Common Name: Ceramic Tile. For purposes of this SDS, the term “ceramic” encompasses all types of tile products (ceramic, porcelain, mosaic, quarry) manufactured and/or sourced by Dal-Tile Corporation.)

Synonyms: Ceramic Tile and Wares

Manufacturer Name: Dal-Tile Corporation
Address: Headquarters Office
7834 C.F. Hawn Freeway, Dallas, TX 75217

Emergency Assistance: Environmental, Health and Sustainability Department
Industrial Hygiene Manager - (214) 309-4295
1-800-933-TILE; (214) 398-1411 (24-hour number)

Recommended Use: Building Material - Tile products manufactured/sourced by Dal-Tile Corporation are environmentally preferable building materials when compared to other floor/wall coverings. As defined by guidelines issued by the Environmental Protection Agency (EPA), the American Society for Testing & Materials (ASTM), and the Federal Trade Commission, Tile is one of the most environmentally friendly building materials you can buy today. Should additional information be desired, please direct your inquiry to the address above.

This document has been prepared in accordance with the Occupational Safety and Health Administration (OSHA) Hazard Communication standard, 29 Code of Federal Regulations (CFR) 1910.1200(g), Safety Data Sheets.

2. HAZARDS IDENTIFICATION

Tile products are mixtures of predominantly clays, silica sand, and other natural occurring minerals that have been mixed with water and fired in a high temperature kiln. The finished, fired tiles are odorless, stable, non-flammable, and pose no immediate hazard to health. Respiratory, hand and eye protection may be needed to prevent excess exposure to airborne particulates if dust is produced by cutting tiles during installation or if dust is produced by any other operations, including demolition/removal projects.

Emergency Overview: Danger! Lung injury and Cancer Hazard

GHS Classification (Global Harmonized Standard Classification):

Carcinogenicity Category 1A (H350)

Specific target organ toxicity, single exposure; Respiratory tract irritation - Category 3 (H335)

Specific target organ toxicity, repeated exposure - Category 1A (H372)

GHS Label, Hazards and Precautionary Statements

GHS Pictogram:

Crystalline Silica:



Category 3 (Respiratory tract irritation) (H335)



Categories 1A(Carcinogenicity)(H372)

Label Signal Word: Danger

Hazard Statements:

(H350) May cause CANCER (inhalation)

(H335) May cause respiratory irritation

(H372) Causes damage to organs (lung/respiratory) through prolonged or repeated exposure (inhalation)

2. HAZARDS IDENTIFICATION (Continued)

Precautionary Statements:

- Do not handle/install until all safety precautions have been read and understood. (P202)
- Do not breathe dust/spray. (P260 + P261)
- Wash skin thoroughly after handling/installing. (P264)
- Do not eat, drink or smoke when handling/installing this product. (P270)
- Wear protective gloves, protective clothing, eye protection, face protection when handling/installing this product. (P280)

Potential Health Effects:

Inhalation: Do not breathe dust. See "Health Hazards" in Section 11 for more details.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Tile products are mixtures of predominately Clays, Silica Sand and other naturally-occurring minerals, that have been mixed with water and fired in a high temperature kiln.

Tiles are manufactured in various shapes, sizes, and colors.

These products do not contain asbestos.

Under normal conditions these products do not release hazardous materials after installation and are not considered hazardous waste should disposal be necessary.

Composition	CAS# / EINECS#	Estimated % by Wt.	EU Class
Crystalline Silica as quartz	CAS: 14808-60-7 EINECS: 238-878-4	0-30	(67/548/EEC) Xn R48/20
Clays	CAS: 1332-58-7 EINECS: 265-064-6	20-55	(67/548/EEC) Xi R36/37/38
Nepheline Syenite	CAS: 37244-96-5 EINECS: N/A	0-50	(67/548/EEC) Xi R36/37/38
Feldspar	CAS: 68476-25-5 EINECS: 270-666-7	0-20	(67/548/EEC) Xi R36/37/38

4. FIRST AID MEASURES

- Eyes: Immediately flush eyes with large amounts of water for at least 15 minutes if dust gets in eyes. Get medical attention if irritation persists.
- Skin: Wash thoroughly after working with tiles.
- Inhalation: Remove to fresh air if exposed to large amounts of tile dust. Administer artificial respiration if breathing has stopped. Keep victim at rest. Call for prompt medical attention.
- Ingestion: Not applicable for intact tiles.

Have emergency eyewash station available in area where tiles are cut.

5. FIRE-FIGHTING MEASURES AND INFORMATION

- Flash Point (Method Used): Not applicable
- Autoignition Temperature: Not applicable
- Flammable Limits (% by Volume in Air): LEL - not applicable
UEL - not applicable
- Fire Extinguishing Media: None required Non-flammable
- Special Fire Fighting Procedures: None required
- Fire and Explosion Hazards: None

6. ACCIDENTAL RELEASE MEASURES

Avoid creating excessive dust. Clean up dust using a vacuum system with a High-efficiency particulate (HEPA) air filter vacuum or damp sweeping. See Section 8 of this SDS concerning PPE information for clean-up.

7. HANDLING AND STORAGE

Do Not Dry Cut using motorized equipment due to potential exposure to Harmful Silica Dust. Use wet cutting methods to reduce generation of dust. When cutting, grinding or removing, use equipment with integral dust collection and/or use local exhaust ventilation. Use respiratory protection in the absence of effective engineering controls.

Do not store near acids. If tiles contact some acids, damage/discoloration to the surface may occur.

Shelf life is unlimited.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Exposure Table

Composition	OSHA PEL	NIOSH IDLH	ACGIH TLV*	Units
Crystalline Silica as quartz				
-respirable fraction	0.05	0.05	0.025	mg/m3
-total dust	15	N.E.	N.E.	mg/m3
Clays				
-respirable fraction	5	N.E.	2	mg/m3
Nepheline Syenite				
-respirable fraction**	5	N.E.	N.E.	mg/m3
Feldspar				
-respirable fraction	N.E.	N.E.	N.E.	mg/m3
-total dust**	15	N.E.	N.E.	mg/m3

* 2017 Edition, respirable fraction to be determined as per Appendix D of ACGIH TLV.

** Covered as particles not otherwise regulated per OSHA and particles not otherwise classified per ACGIH.

N.D. - Not determined

N.E. - Not established

8.2 EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation: Use adequate ventilation during installation and/or removal to keep exposure to dust below recommended exposure levels. Avoid inhalation of dust. The highest probability of silica exposure occurs during installation using dry cutting methods or during removal of installed tile. Do Not Dry Cut using motorized equipment due to potential exposure to Harmful Silica Dust. Use wet cutting methods to reduce generation of dust.

Respiratory Protection: Use of a properly fitted NIOSH/MSHA approved particulate respirator is recommended when cutting tiles for installation or during the removal of installed tile.

Eye Protection: Use dust-proof goggles or safety glasses with side shields. Contact lenses may absorb irritants. Do not wear contact lenses in work areas.

Skin Protection: Cotton or leather work gloves should be worn when cutting this product to minimize skin exposure to dust and/or cuts. Wash hands prior to eating, drinking, or smoking, and at the end of the work shift, after cutting operations are conducted.

NOTE: Personal protection information in Section 8 is based on general information for normal uses and conditions. Where special or unusual uses or conditions exist, it is suggested that the assistance of an industrial hygienist or other qualified professional be obtained.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Brittle solid; color may vary
Odor:	Odorless
Melting Point:	Not Available (>2200 °F)
Boiling Point:	Not applicable
Vapor Pressure:	Not applicable
Vapor Density (Air = 1):	Not applicable
Solubility in Water:	Insoluble
Specific Gravity (H ₂ O = 1):	1.6 to 2.1
Percent Volatile by Volume:	Not applicable
Evaporation Rate (Ethyl Ether = 1):	Not applicable
Viscosity:	Not applicable
Volatility:	0 g/L Volatile Organic Compounds (VOCs)

10. STABILITY AND REACTIVITY

Stability:	Stable in current form.
Conditions to Avoid:	Avoid contact with acids (e.g., acetic, hydrofluoric, etc.)
Incompatibility (Materials to Avoid):	Avoid contact with acids (e.g., acetic, hydrofluoric, etc.)
Hazardous Polymerization:	Will not occur.
A221 Hazardous Decomposition Products:	None.

11. TOXICOLOGICAL INFORMATION

Potential Health Effects

Primary Routes of Exposure

None for intact tile. Inhalation and potential exposure to eyes, hands, or other body parts if contact is made with broken tile, and/or during procedures involving the cutting of tiles, and/or for operations involving the removal of installed tiles.

Acute Effects

No acute effects from exposure to intact tile are known. Working with broken or cut tile produces a potential for cuts to the hand and exposed body parts. Acute effects such as eye irritation may occur if associated with high dust operations such as dry cutting tile or during the removal of installed tile. In very rare cases, symptoms of acute silicosis, a form of silicosis (a nodular pulmonary fibrosis) associated with exposure to respirable crystalline silica, may develop following acute exposure to extremely dusty environments caused by generation of tile dust. Signs such as labored breathing and early fatigue may indicate silicosis; however, these same symptoms can arise from many other causes.

Chronic Effects

No chronic effects are known for exposure to intact tile. Long-term, continual exposure to respirable crystalline silica at or above established permissible occupational exposure limits may lead to the development of silicosis, a nodular pulmonary fibrosis (NPF). NPFs are also associated with pulmonary tuberculosis, bronchitis, emphysema, and other airway diseases. This type of chronic exposure to silica dust may also result in the development of autoimmune disorders, chronic renal disease, and other adverse health effects.

Recent epidemiologic studies demonstrate that workers exposed to elevated silica concentrations have a significant risk of developing chronic silicosis. Signs such as labored breathing and early fatigue may indicate silicosis; however, these same symptoms can also arise from many other causes.

Potential Adverse Interactions

Silicosis may be complicated by severe mycobacterial or fungal infections and result in tuberculosis (TB). Epidemiologic studies have established that silicosis is a risk factor for developing TB. Any existing respiratory or pulmonary diseases may be complicated by exposure to respirable crystalline silica. Smoking may increase the risk of adverse effects if done in conjunction with occupational exposure to silica dust at or above permissible exposure limits.

Carcinogen Status

Respirable crystalline silica is classified by the International Agency for Research on Cancer (IARC) as a Group I Carcinogen (carcinogenic to humans). The National Toxicology Program (9th Report) lists respirable crystalline silica as "Known to be a Human Carcinogen". USDOL/OSHA and NIOSH have recommended that crystalline silica be considered a potential occupational carcinogen.

Overview of Animal Testing

Short term experimental studies of rats have found that intratracheal instillation of quartz particles leads to the formation of discrete silicotic nodules in rats, mice and hamsters.

Oral (silica) Lethality

- LD50 Rat oral >22,500 mg/kg
- LD50 Mouse oral >15,000 mg/kg
- LC50 Carp >10,000 mg/l (per 72 hr.)

12. ECOLOGICAL INFORMATION

No information available at this time.

13. DISPOSAL CONSIDERATIONS

Waste should be disposed of in a landfill certified to accept such materials in accordance with federal, state, and local regulations.

14. TRANSPORTATION INFORMATION

U.S. D.O.T Shipping Name:	Not applicable
Hazard Class:	Non-regulated (for disposal purposes material is non-hazardous Class III regulated material)
ID Number:	Not applicable
Marking:	Not applicable
Label:	None
Placard:	None
Hazardous Substance/RQ:	Not applicable
Shipping Description:	Porcelain/Ceramic Tiles
Packaging References:	None

Not regulated for transportation under the IATA/ICAO, IMDG, EU ADR, or Canadian TDG Regulations.

15. REGULATORY INFORMATION

This product and/or its components have been previously introduced into U.S. commerce and is listed in the Toxic Substances Control Act (TSCA) Inventory of Chemicals in Commerce. Hence, it is subject to all applicable provisions and restrictions under TSCA 40 CFR Section 721 and 723.250.

This tile contains less than 1 percent by weight each of the following elements, which are SARA 313 Recordable: Antimony, Arsenic, Barium, Beryllium, Cadmium, Cobalt, Chromium, Copper, Manganese, Mercury, Nickel, Lead, Silver, Thallium, Tin, Titanium, Vanadium, and Zinc.

Title 22 Division 2, California Code of Regulation Chapter 3 (Proposition 65): This product has been evaluated for exposure levels and results conclude use of this product does not create an exposure to chemical(s) which is(are) known to the State of California to cause cancer, birth defects or other reproductive harm.

This product or its components meets the following hazard definition(s) as defined by the Occupational Safety and Health Hazard Communication Standard (29 CFR Section 1910.1200):

- | | | |
|---|---|---|
| <input type="checkbox"/> Combustible Liquid | <input type="checkbox"/> Flammable Aerosol | <input type="checkbox"/> Oxidizer |
| <input type="checkbox"/> Compressed Gas | <input type="checkbox"/> Explosive | <input type="checkbox"/> Pyrophoric |
| <input type="checkbox"/> Flammable Gas | <input checked="" type="checkbox"/> Health Hazard (See Sections 3 & 11) | <input type="checkbox"/> Unstable |
| <input type="checkbox"/> Flammable Liquid | <input type="checkbox"/> Organic Peroxide | <input type="checkbox"/> Water Reactive |
| <input type="checkbox"/> Flammable Solid | | |

Based on information presently available, this product does not meet any of the hazard definitions of 29 CFR Section 1910.1200.

Note: The information in this data sheet provides information related to the potential hazards associated with dusts which may be produced during cutting or otherwise changing the shape of the tile during installation and/or removal.

16. ADDITIONAL INFORMATION (for intact tile)

Global Harmonization Identification System			
GHIS:	Health: 4	Fire: 4	Reactivity: 4
Hazardous Material Identification System			
HMIS:	Health: 0	Fire: 0	Reactivity: 0
National Fire Protection Association			
NFPA:	Health: 0	Fire: 0	Reactivity: 0
SDS Preparation Date:	05/31/2015	Revision Date:	July 27, 2020