



Certificate of Compliance

Tides HDP

Florida Tile

In addition to meeting the GREENGUARD Children & Schools Certification Criteria, this product complies with CA Section 01350 Version 1.1, including the 2012 update for formaldehyde at 9 µg/m³ (office seating ≤ 4.5 µg/m³).

Certification Details:

Certificate No: 28501-420

Status: Certified

Period: 02/2013 - 11/2013

Restrictions:

Reference Standard: GGPS.002 GREENGUARD Children & SchoolsSM Standard

Product Type: All Products

Criteria	Allowable Limits
Individual VOCs ^{1,2}	≤ 1/100 TLV and ≤ ½ CA CREL (Office Seating ≤ 1/100 TLV and ≤ ¼ CA CREL)
Formaldehyde	≤ 0.0135 ppm / 13.5 ppb (Office Seating ≤ 0.00675 ppm / 6.75 ppb)
TVOC ³	≤ 0.22 mg/m ³
Total Aldehydes	≤ 0.043 ppm / 43 ppb
Total Phthalates	≤ 0.01 mg/m ³
Total Particles ⁴	≤ 0.02 mg/m ³

See referenced standard for a complete technical explanation.

¹ Any VOC not listed must produce an air concentration level no greater than 1/100 the Threshold Limit Value (TLV) industrial work place standard (Reference: American Conference of Government Industrial Hygienists, 6500 Glenway, Building D-7, Cincinnati, Ohio 45211-4438) and no greater than ½ the CA Chronic Reference Exposure Level (CREL) http://www.oehha.ca.gov/air/chronic_rels/AllChrels.html (Adopted by the State of California Office of Environmental Health Hazard Assessment (OEHHHA), December 2008).

² 1-Methyl-2-Pyrrolidinone must be ≤ 0.08 mg/m³ for office seating and ≤ 0.16 mg/m³ for all other product types.

³ Defined to be the total response of measured VOCs falling within the C₆-C₁₆ range, with responses calibrated to a toluene surrogate.

⁴ Particles are only applicable to fibrous, particle-releasing products with exposed surface area in air streams.

Seating, Workstations and Casework Systems comply with ANSI/BIFMA e3-2012 Credit 7.6.2. Workstations have been evaluated and show compliance in the the Open Plan and Private Office Environments. Casework systems have been evaluated and show compliance in the Private Office Environment. Seating shows compliance in the BIFMA seating environment for office chairs and the CDPH classroom for student seating. Educational furniture is evaluated in the CDPH classroom environment.

Complies with California Department of Public Health "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, Version 1.1" (CA Section 01350).

GREENGUARD Certification affirms that representative samples of the products tested meet the criteria of the referenced standards and the requirements of the specific certification program. Certification testing is conducted according to a consistent, defined protocol. It does not measure emissions under usage conditions other than those defined in the protocol and does not address potential environmental impact other than chemical emissions.

The GREENGUARD Environmental Institute (GEI) is an independent, third-party certification organization that qualifies products for low chemical emissions. GREENGUARD certification programs use defined product standards, test methodologies, product sample collection and handling procedures, testing types and frequencies, program application processes, and on-going verification procedures. GREENGUARD standards, methods, and procedures are available at www.GREENGUARD.org.



Certificate of Compliance

Tides HDP Florida Tile

This product has been certified according to the GREENGUARD Indoor Air Quality (IAQ) Certification Program for Low Emitting Products

Certification Details:

Certificate No: 28501-410

Status: Certified

Period: 02/2013 - 11/2013

Restrictions:

Reference Standard: GGPS.001 GREENGUARD IAQ Standard for Building Materials, Finishes, and Furnishings

Product Type: Furniture Components/Materials, Seating, and Free Standing Furniture and Furnishing Units

Criteria	Allowable Limits
TVOC ¹	$\leq 0.25 \text{ mg/m}^3$
Formaldehyde	$\leq 0.025 \text{ ppm}$
Total Aldehydes ²	$\leq 0.05 \text{ ppm}$
Individual VOCs ³	$\leq 0.1 \text{ TLV}$
4-phenylcyclohexene	$\leq 0.0033 \text{ mg/m}^3$

Listing of measured carcinogens and reproductive toxins as identified by California Proposition 65, the U.S. National Toxicology Program (NTP), and the International Agency on Research on Cancer (IARC) must be provided.

Any pollutant regulated as a primary or secondary outdoor air pollutant must meet a concentration that will not generate an air concentration greater than that promulgated by the National Ambient Air Quality Standard (U.S. EPA, code of Federal Regulations, Title 40, Part 50).

See referenced standard for a complete technical explanation.

¹ Defined to be the total response of measured VOCs falling within the C₆-C₁₆ range, with responses calibrated to a toluene surrogate.

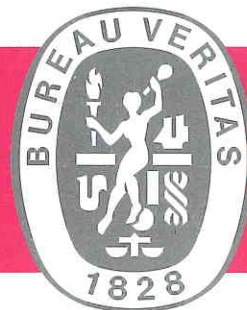
² Defined to be the total response of a target list of aldehydes (2-butanal; acetaldehyde; benzaldehyde; 2, 5-dimethylbenzaldehyde, 2-methylbenzaldehyde; 3-and/or 4-methylbenzaldehyde; butanal; 3-methylbutanal; formaldehyde; hexanal; pentanal; propanal), with each individually calibrated to a compound specific standard.

³ Any pollutant not listed must produce an air concentration level no greater than 1/10 the Threshold Limit Value (TLV) industrial work place standard (Reference: American Conference of Government Industrial Hygienists, 6500 Glenway, Building D-7, Cincinnati, Ohio 45211-4438). Seating complies with ANSI/BIFMA X7.1-2011, ANSI/BIFMA M7.1-2011, and ANSI/BIFMA e3-2012 Credit 7.6.1. Seating has been evaluated and shows compliance in the ANSI/BIFMA seating environment.

GREENGUARD Certification affirms that representative samples of the products tested meet the criteria of the referenced standards and the requirements of the specific certification program. Certification testing is conducted according to a consistent, defined protocol. It does not measure emissions under usage conditions other than those defined in the protocol and does not address potential environmental impact other than chemical emissions.

The GREENGUARD Environmental Institute (GEI) is an industry independent, third-party certification organization that qualifies products for low chemical emissions. GREENGUARD Certification programs use defined product standards, test methodologies, product sample collection and handling procedures, program application processes and on-going verification procedures. GREENGUARD standards, methods, and procedures are available at www.GREENGUARD.org.

BUREAU VERITAS
Certification



Certification

Awarded to

FLORIDA TILE INC.

1247 Alton Road
LAW RENCBURG - KENTUCKY 40342 - USA

**Bureau Veritas certify that the products listed in the annexed certificate
have been audited and found to be in accordance with the requirements of:**

Disciplinare Tecnico (Rev.4 June 07, 2011)

SP 28 Bureau Veritas Rev.0 - Procedura operativa per la certificazione di Prodotto
% materiale riciclato

GP01P Bureau Veritas Rev. 3 - Regolamento generale per la certificazione di conformità
di prodotto.

In accordance with the following characteristic:

presence of at least 40%
pre-consumer recycled material by weight

The parameters analyzed were defined according to:

- LEED 2009 for New Construction & Major Renovations Rating System version 3 - 2009
- UNI EN ISO 14021:2002 - Etichette e dichiarazioni ambientali Asserzioni ambientali autodichiarate (etichettatura ambientale di tipo II)

Original Emission Date: 09/09/2011
Last Emission Date : 09/09/2011
Expiration Date: 08/09/2014

Subject to the continued satisfactory operation, to check this certificate validity please refer to website:
www.bureauveritas.it

Further clarifications regarding the scope of this certificate and the applicability of standard's requirements may
be obtained by consulting the organisation.

Certification N°: **609/001**





Certification of Physical Properties
Florida Tile Quality Assurance Department

Abrasion Resistance

Series: Tides HDP	Glaze Finish: Glazed
Color - Sizes: All	ANSI Tile Type: Porcelain Floor Tile
Reported by: Aaron Woodard	Report Date: March 8, 2013

Procedure: ASTM C1027

Description: Tiles are placed on an ASTM compliant abrasion tester and abraded by the rotation of an abrasive media acting on the tiles.

Classification:

Revolutions to Visible Abrasion	Class	Classification
100	0	Not recommended for floors
150	1	Light Residential
600	2	Residential
750 or 1500	3	Heavy Residential/Lt Commercial
2100, 6000, or 12000	4	Commercial
12000+ and stain test	5	Heavy Commercial

Results:

Revolutions	Class	Classification
7500	4	Commercial

Dan Marvin
Director of Quality Assurance

** Tests were conducted by an independent third party laboratory using industry standard equipment and techniques. Values are offered in good faith as being accurate and typical of normal production. Due to natural variation of raw materials and manufacturing processes, the values of tile purchased for any particular installation may vary from these numbers. Buyer should evaluate suitability and safety of any product prior to installation. No warranty of any kind, expressed or implied, is made with respect to the information contained herein.



Certification of Physical Properties
Florida Tile Quality Assurance Department

Breaking Strength

Series: Tides HDP	Glaze Finish: Glazed
Color - Sizes: All	ANSI Tile Type: Porcelain Floor Tile
Reported by: Aaron Woodard	Report Date: March 8, 2013

Procedure: ASTM C648

Description: Tiles are placed on a standard breaking strength machine and stressed until broken. The maximum force achieved before breaking is the strength of the sample. Reported value is the average of 10 pieces.

Requirement: ANSI standards require a minimum breaking strength for tile of this type to be equal or greater than 250 lbs

Results:

Average 12x12:	550 LBS	Pass
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Director of Quality Assurance

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Certification of Physical Properties
Florida Tile Quality Assurance Department

Moh's Hardness

Series: Tides HDP	Glaze Finish: Glazed
Color - Sizes: All	ANSI Tile Type: Porcelain Floor Tile
Reported by: Aaron Woodard	Report Date: March 8, 2013

Procedure: EN 101

Description: Tiles are tested by moving a mineral tipped stylus across the surface and looking for a scratch to be produced during 4 test cycles. The scale is calibrated using increasingly more dense minerals.

Classification:

Moh's Scale	Mineral
5	Apatite
5.5	Opal
6	Turquoise
6.5	Jade
7	Quartz
7.5	Emerald
8	Topaz
8.5	Alexandrite
9	Ruby
10	Diamond

Results:

Moh's Scale	Mineral
7	Quartz

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Certification of Physical Properties
Florida Tile Quality Assurance Department

Water Absorption

Series: Tides HDP	Glaze Finish: Glazed
Color - Sizes: All	ANSI Tile Type: Porcelain Floor Tile
Reported by: Aaron Woodard	Report Date: March 8, 2013

Procedure: ASTM C373

Description: Dried samples are boiled for 5 hours, then allowed to sit for 24 hours in distilled water. The percent water absorption is calculated by the difference in weight between the wet tile and the dry tile.

Classification:

Scale	Classification
≤0.5%	Porcelain
0.5% - 3.0%	Vitreous
3.0% - 7.0%	Semi-Vitreous
7.0% - 20.0%	Non-Vitreous

Results:

Result	Classification
≤0.5%	Porcelain

Third Party Certification: This product is Certified Porcelain by the Porcelain Tile Certification Agency



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Certification of Physical Properties
Florida Tile Quality Assurance Department

Static and Dynamic Coefficient of Friction

Series: Tides HDP	Glaze Finish: Glazed
Color - Sizes: All	ANSI Tile Type: Porcelain Floor Tile
Reported by: Aaron Woodard	Report Date: March 8, 2013

Procedure: ASTM C1028, A137.1

Description: SCOF Tiles are tested wet and dry. A neolite 'heel' is weighted with a 50 lb weight and force is applied until assembly begins to move. The peak force is recorded and the coefficient of friction is calculated versus a standard tile. Reported averages are from three separate test samples from the same lot
DCOF Samples are tested with the BOT 3000 device as per ANSI 137.1 - 2012

Results:

Wet SCOF	0.6
Dry SCOF	0.8
Wet DCOF	Pass

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Certification of Physical Properties
Florida Tile Quality Assurance Department

Percentage of Recycled Content

Series: Tides HDP	Glaze Finish: Glazed
Color - Sizes: All	ANSI Tile Type: Porcelain Floor Tile
Reported by: Aaron Woodard	Report Date: March 8, 2013

Procedure: Calculated per LEED for New Construction and Major Renovations Rating System, April 2009

Description: The amount of pre- and post-consumer waste is calculated based on a percentage of the body by weight

<u>Results:</u>	Pre-consumer RMC	40%
	Post-consumer RMC	0%

Recycled Content is certified by Bureau Veritas - certificate available upon request

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Certification of Physical Properties
Florida Tile Quality Assurance Department

Bond Strength

Series: Tides HDP	Glaze Finish: Glazed
Color - Sizes: All	ANSI Tile Type: Porcelain Floor Tile
Reported by: Aaron Woodard	Report Date: March 8, 2013

Procedure: ASTM C482

Description: Tiles are bonded with a standard mortar to a standard cement block.
Force is applied to the tile until the bond fails. Results are average force required for failure for 5 pieces.

Requirement: ANSI standards require a minimum bond strength for tile of this type to be equal to or greater than 50 PSI

<u>Results:</u>	Average:	375 PSI	Pass
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