

Product Declaration

Health and Environmental

Luxury Vinyl Tile (Solid Vinyl Tile)

Luxury Vinyl (LVT)
Product Declaration



Hen House Market, Kansas City, MO
Jeff Maple Design

Committed to Sustainability.

Armstrong Flooring is committed to delivering solutions that reduce the environmental impact of the buildings you create, from product design and raw material selection, to how our products are produced and delivered.

This Product Declaration documents the following:

- Product ingredients
- Ingredient screening
- Life Cycle Assessment (LCA) Summary
- VOC Emissions and VOC content information
- Environmental certifications
- Performance attributes

LVT is designed to be durable, beautiful and easy to install, making it a great product for commercial applications.

Luxury Vinyl Tile

Functional Unit – 1 m² of LVT 1 year service life

LCA IMPACT* MEASURES	TOTAL
Primary Energy (MJ)	221.7
Global Warming Potential (kg CO ₂ equivalent)	10.47
Acidification Potential (kg SO ₂ equivalent)	7.65E-02
Eutrophication Potential (kg PO ₄ ³⁻ equivalent)	7.10E-03
Ozone Depletion Potential (kg R11 equivalent)	9.87E-09
Photochem Ozone Creation Potential (kg Ethene equivalent)	5.20E-03
PERFORMANCE ATTRIBUTES	
Acoustics NRC (Absorption)	0.05
Static Load (psi)	250
Light Reflectance	up to 64%
ASTM F1700	Meets

Flooring Ingredients: Limestone, Polyvinyl Chloride (PVC), Di(2-ethylhexyl) terephthalate (DEHT), Calcium Phosphate, Magnesium Phosphate

* Based on CML2010 Impact Factors

Visit ArmstrongFlooring.com/transparency for further information.

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This Product Declaration (1) discloses the known ingredients in their raw material form and (2) provides building industry professionals and other third parties with a summary of environmental and ingredient information about this product. This Product Declaration includes summary life cycle assessment (LCA) information, VOC emissions information, environmental certifications, and key performance attributes for the product.

Declaration Number:	APD-0004	
Declaration Holder:	Armstrong Flooring, Inc.	
Product	Natural Creations® with Diamond 10® Technology, Natural Creations® Classics, Natural Creations® with I-Set™, Parallel® 20, Parallel® 12	
CSI Master Format	09 65 19.23 (Vinyl Tile Flooring)	
Product Website	http://www.armstrong.com/commflooringna/products/lvt	
Product Application	Floor covering choice in commercial spaces: <ul style="list-style-type: none"> • Hospitality • Education • Healthcare • Office • Retail • Assisted Living 	
Manufacturing Locations:	Lancaster, PA and/or Wuijiang, CN	
Disclosure	All product ingredients known or reported (by a supplier) to be present in a concentration of at least 0.1% (1,000 ppm) or lower concentrations if required by OSHA hazard communications are set forth in the product ingredient table. The CASRN (Chemical Abstract Services Registration Number) is listed for reference. Proprietary ingredients are screened as indicated above, but the name and CASRN are not listed to protect proprietary information. All ingredients are screened against the regulatory and nonregulatory references set forth in the reference section.	
APD Date of Issue:	April 1, 2016	

Sustainability Information **Product VOC Emissions**

- **Certifications for this product:**
 - FloorScore® Certification – Indoor air quality emissions certification
- **Environmental Product Declaration (EPD) - Product Specific**
 - Certified by ASTM; conforms to the requirements of ISO 14025, 14040, 14044 and ISO 21930
- **Extended Producer Responsibility/Recyclable:**
Can be recycled through the Armstrong Flooring Recycling Program (www.ArmstrongFlooring.com/reclaim)

VOC Emissions (Volatile Organic Compounds): Building material is tested and determined compliant in accordance with following VOC emissions standards:

California Department of Public Health (CDPH) V 1.1-2010

Yes No Not Applicable

Total Volatile Organic Compound (TVOC) Emission Levels:
In accordance with CDPH V1.1-2010

<0.5 mg/m³
 0.5-5.0 mg/m³
 >5.0 mg/m³



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Product Ingredients

The following table represents the ingredients that are in this product. Each ingredient was screened against the regulatory and non-regulatory references set forth below. When an ingredient is listed on a regulatory or non-regulatory reference, it is noted below with an (X). The results are based on the individual ingredient reviewed in its raw material state, and their inclusion on a reference list does not necessarily pertain to, or represent the form of the ingredient in the final finished product. The following table represents the ingredients that are in this product at concentrations of at least 1,000 ppm (0.1%).

ROLE	INGREDIENT Listed in descending order based on % by weight.	CASRN	MASS %	(X) NOTED IF INGREDIENT IS ON THE LIST								NOTES
				IARC ¹	REACH ²	NTP ³	OSHA ⁴	PROP ⁵ 65	TRI ⁶ PBT	LIVING ⁷ BUILDING CHALLENGE	GREEN ⁸ SCREEN BM1	
	Ingredient Name											
Filler	Calcium Carbonate (Limestone)	1317-65-3	60-65%									
Binder	Polyvinyl Chloride (PVC)	9002-86-2 9003-22-9	25-30%							x		
Plasticizer	Di(2-ethylhexyl) terephthalate (DEHT)	6422-86-2	5-10%									DEHT is a GreenScreen BM3 chemical. BM3 chemicals are recommended for use.
Stabilizer	Calcium Phosphate	10103-46-5	1-2%									
	Zinc Compounds	Proprietary										

References

The regulatory references include:

- IARC – International Agency on the Research of Cancer Terminology
Group 1 – Carcinogenic to Humans
Group 2 – Probably Carcinogenic to Humans
Group 3 – Possibly Carcinogenic to Humans
Source: <http://monographs.iarc.fr/ENG/Classification/index.php>
- REACH – Registration, Evaluation, Authorization and Restriction of Chemicals
Substance of Very High Concern (SVHC) Authorization or Candidate List (as of the date of this declaration)
Source: <http://echa.europa.eu/addressing-chemicals-of-concern/>
- NTP – National Toxicology Program – Known Human Carcinogen and Reasonably Anticipated Carcinogen
Source: <http://ntp.niehs.nih.gov/?objectid=03C9AF75-E1BF-FF40-DBA9EC0928DF8B15>
- OSHA – Occupational Safety and Health Administration Carcinogen list.
Source: <https://www.osha.gov/SLTC/carcinogens/index.html>
- Prop 65 – California Proposition 65 – Known to the state of California to cause cancer or reproductive toxicity
Source: http://oehha.ca.gov/prop65/prop65_list/Newlist.html
- USEPA TRI – Toxic Release Inventory – Persistent, bioaccumulative and toxic (PBT) chemicals – Known persistent, bioaccumulative and toxic chemicals and compounds.
Source: http://www.epa.gov/tri/trichemicals/pbt%20chemicals/pbt_chem_list.htm
- Living Building Challenge™ Red List - was developed by the Cascadia Region Green Building Council and International Living Building Institute.
Source: <http://living-future.org/living-building-challenge/materials>
- GreenScreen® - is a Chemical Hazard Assessment method developed by the Cleaner Production Action. The Pharos GreenScreen List Translator (LT) was used to screen and identify any Chemical of High Concern (LT-1). An LT-1 chemical may be considered equivalent to a Benchmark 1 (BM1) chemical using the full GreenScreen method.
Source: <http://www.cleanproduction.org/Greenscreen.v1-2.php>

LEEDv4 Contribution

**MRCredit:
Building Disclosure and Optimization –
Material Ingredients – Option 1**

This Manufacturer Inventory meets the guidelines for this credit.

**MRCredit:
Building Disclosure and Optimization –
Material Ingredients – Option 2**

This product meets the guidelines for International Alternative Compliance Path – REACH Optimization. The end use product and materials do not contain substances that meet REACH criteria for substances of very high concern. The product does not contain ingredients listed on the REACH Authorization or Candidate list.