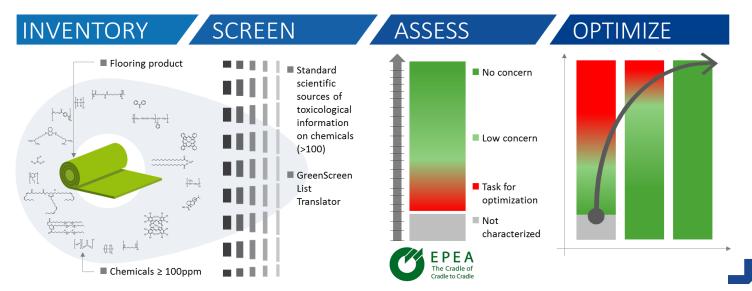
## Tarkett's Path to Positive Optimization Strategy

It is estimated that we spend approximately 90% of our time indoors, therefore, it is important to consider the building materials with which we surround ourselves. Tarkett's goal is to design products that will enhance the human experience and allow us to live and work in spaces that promote health and well-being. Transparency and material reporting is essentially the first step but in order to make real and significant changes, we need to go a step further and not only inventory, screen and assess, but also optimize products for present and future uses.

At Tarkett, the optimization of our product compositions is at the core to our "Closed Loop, Circular Design" strategy powered by Cradle to Cradle® principles and the Circular Economy.

Tarkett's goal is to design our products today to be our raw materials of tomorrow, applying the first Cradle to Cradle® principle (Waste = Food), to select healthy and safe materials that can be perpetually cycled.



#### The Cradle to Cradle Product Optimization process is based on the following 4 steps:

- **Material Inventory:** In collaboration with our suppliers, we inventory the raw materials used in our products to a minimum of 1000 ppm with the goal of inventorying at 100ppm in the near future. We identify them by Chemical Abstracts Service Registry Number (CASRN).
- Material Screening: Individual chemicals are screened for their hazard rating using the Green Screen List Translator (GS-LT), along with more than 100 chemical hazard lists and scientific sources of toxicological information in use at EPEA (Environmental Protection and Encouragement Agency), the European Cradle to Cradle scientific research Institute based in Germany. For more information, please visit EPEA website (<a href="http://www.epea.com">http://www.epea.com</a>).
- Material Assessment: The product and its materials are assessed according to the Cradle to Cradle® principles and considering both the intrinsic hazard/safety properties of chemicals and occupant exposure. The product's environmental and health quality is assessed on the basis of a target scenario where materials involved in sourcing, production, use and post-use handling serve as technical nutrients for future production or interact beneficially with exposed organisms and ecosystems as biological nutrients. The assessment is conducted by EPEA.
- **Optimization:** Products are reformulated using Cradle to Cradle® principles, by selecting materials that are safe, healthy and beneficial for humans and the environment and that can be perpetually cycled.

Thank you for considering our products and for your commitment to improving the built environment.

Diane Martel

Vian Wartel

Vice President of Environmental Planning and Strategy

Feliks Bezati, Ph.D. Director of Product Stewardship



## **Material Health Statement (MHS)**

### **LVT Victory® Series**

**ISSUED TO** Tarkett

**PRODUCTS COVERED VALID UNTIL**LVT Victory® Series
30 September 2018

**INVENTORY THRESHOLD** 1000 ppm (0.1%) of the product

THIRD-PARTY VERIFICATION GreenCircle Certified, LLC

ASSESSMENT BODY EPEA International EPEA REGISTRY No MHS 39580-1





MATERIAL FUNCTION	CHEMICAL	CASRN	% IN PRODUCT	GS-LT	EPEA RATING	COMMENT ON EPEA RATING
Polymer	PVC	9002-86-2	70-80	LTUNK	С	Transitional use of PVC is tolerated in durable applications designed with safe materials and a collection and recycling program in place. LVT Victory® use plasticizers and stabilizers that belong to the best available and VCM content is below 1ppm. Tarkett provides an after use take back guarantee within the ReStart reclaiming program. For more information on PVC assessment by EPEA, please visit EPEA position on PVC.
	Pre-additives	Various	< 0.1		Grey	Pre-additives unknown, assessment on-going.
Plasticizer	DEHT 2EHMT	6422-86-2 63468-13-3	10-20	BM4 BM4		Alternative to phthalate plasticizers approved for applications with food contact with high migration limit reflecting a much better safety profile.
Heat Stabilizers	Epoxidized soy bean oil	8013-07-8	< 5	LTUNK		Acts as plasticizer and scavenger of hydrochloric acid that may be formed during the flooring use. Acts in synergy with Ca-Zn soaps.
	Ba-Zn soaps	Proprietary	< 5	LT1 <sup>1</sup> LTP1 <sup>2</sup> LTUNK		Zinc is essential trace element; Barium has no biological role. Migration potential unknown.
Filler	Calcium carbonate	1317-65-3	< 1	LTUNK	В	Natural minerals containing variable levels of quartz and monitored levels of heavy metals. Potential health issue related to inhalation of quartz containing dust during mining/production. No concern in the finished product.
Pigments	Titanium dioxide	13463-67-7		BM1 <sup>3</sup>		Potential health issue related to dust inhalation during mining/production. No concern in finished product.
	Various pigments used depending on color	Various	< 1	BM2 LTUNK		Inorganic mineral pigment. Potential health issue related to dust inhalation during mining (production). No concern in finished product.
				LTU	V 1	Potential health issues associated with chlorinated or copper containing pigments if the product is incinerated.
				LTP1 <sup>4</sup> BM1 <sup>5</sup> LTU UNK	Grey Grey Grey Grey	Undefined pigment compositions.
Processing aid	Stearic acid	57-11-4	<1	LTUNK	В	No safety concern during use and grinding based recycling.

Hazard: <sup>1</sup> High-Carcinogen, <sup>2</sup> Very High-Eye irritant, <sup>3</sup> High-Carcinogen, <sup>4</sup> Medium-Endocrine disruptor, <sup>5</sup> High-Carcinogen

EPEA's rating, based on Cradle® material assessment, is made in relation to a quality target and post-use scenario and is specific to supply chain materials used for Tarkett products, see previous page

A or B C

Chemical component leads to no concern in the material flow scenario for the product  $% \left( 1\right) =\left( 1\right) \left( 1\right) \left($ 

Chemical component is of low concern in the material flow scenario for the product

Chemical component is a task for optimization

Chemical component is not characterized enough to be classified.

GS-LT: GreenScreen List Translator is related to the intrinsic CASRN properties, independent from the product use

LT1 Chemical is found on an authoritative list of the most-toxic chemicals

LTP1 Chemical is found on an authoritative list of the most-toxic chemicals

UNK Unknown (no data on List Translator Lists)

Chemical to be avoided because it's known to be of high concern

BM2 Chemical for which manufacturers should seek safer substitutes

confidence level is lower BM3 Chemical that has some hazards associated with it

LTUNK Chemical's hazard level is unspecified. BM4 Chemical that's preferred because it's not suspected of being hazardous

Not enough information is available BMU Chemical with insufficient data to benchmark



# **LEED v4 – Score Card**

## **LVT Victory® Series**

**PRODUCTS COVERED** LVT Victory® Series

MATERIAL & RESOURCES											
MRc2. Building product disclosure and optimization — Environmental Product Declarations											
$\overline{\checkmark}$	Option 1: Environmental Product Declaration (EPD) – 1 point										
	☐ Product-specific EPD ☐ Industry-wide (generic) EPD ☐ Product-specific declaration										
	Option 2: Multi-attribute Optimization – 1 point										
	3 <sup>rd</sup> party certified products that demonstrate impact reduction below industry average										
	c3. Building product disclosure and optimization — Sourcing of Raw Materials										
$\checkmark$											
	✓ U.N. Globa	•		ability Report	☐ ISO 26000 ☐ OECD						
$\checkmark$	•	ership Extraction F		l .							
	Bio-based materials	Pre-Consumer	Post- Consumer	Manufacturing Location	Extended Producer Responsibility						
	-	-	-	Florence, AL	Yes (ReStart® progra	m)					
MRc4. Building product disclosure and optimization – Material Ingredients											
$\overline{V}$	Option 1: Material Ingredient Disclosure – 1 point										
_	<b>✓</b> Manufactu	rer Inventory	☐ Crad	Cradle to Cradle Certification Declare HPD							
П	Option 2: Mater	_	_								
_	☐ Cradle to Cradle Certification ☐ GreenScreen Benchmark ☐ REACH ☐										
MRc	5. Constructio	n and demoli	tion waste m	anagement							
Reclamation and recycling program proposed – Tarkett's ReStart® program											
INDOOR ENVIRONMENTAL QUALITY											
	Enhanced Ind										
	Enhanced IEQ Strategies – Abrasive Action entry walk-off systems – 1 point										
EQc2. Low-emitting materials											
$\overline{\checkmark}$	Certification compliant with California Department of Public Health (CDPH) – FloorScore®										
TV	TVOC emissions 0.5 mg/m³ or less Between 0.5 and 5.0 mg/m³ 5.0 mg/m³ or more										

For more information please visit <a href="www.tarkettna.com/mhs">www.tarkettna.com/mhs</a> or contact us <a href="mailto:mhs@tarkett.com">mhs@tarkett.com</a>

