New Product Launch Biomass Composition Tile

# " TSUCHINAGI "

# Vinyl Composition Tile = Tiles with their distinct material texture Unique Texture X Contemporary Trend

Vinyl Composition Tile are currently perceived as "Inexpensive tile". Since 1953, we Tajima introduced P-TILE, the first plastic tile in Japan, we have been developing and manufacturing composition tiles with pride of craftsmanship.

We redefine the value of vinyl composition tiles by introducing products that combine "Unique Texture" and "Contemporary Trend Concepts"

since 1953

In recent years, due to the COVID-19 pandemic, there has been a rapid increase in spaces adopting Biophilic design(the design incorporating natural element), which brings the calming effects. While elements like stones, trees, and greenery have been deliberately brought indoors, there have been limited instances of bringing soil inside due to concerns about dirt and cleanliness.

#### OUR PROPOSAL





Tajima introduced MORTALIKE in response to the growing trend for mortar-like design in Japan and the demand for distinctive textures that are hard to achieve with heterogeneous tiles. It has since become one of our best-selling products. Now, we present 'TSUCHINAGI,' a composition tile with an earthy motif, as a part of the biophilic design movement that has been gaining traction in recent years.

COMPOSITION TILE × MORTAR

COMPOSITION TILE × SOIL
New Product TSUCHINAGI

#### PRODUCT CONCEPT

# **LIVING WITH SOIL**

For centuries, soil has served as a fundamental building material, fostering a deep connection between people and the earth. Over time, we've seen a shift towards other materials like stone, wood, and mortar, yet the sense of warmth and comfort that soil provides endures. This enduring connection is precisely why we advocate for soil as a key element in biophilic design, aligning human spaces with the natural world, a concept currently gaining significant attention. (1) Calm(NAGI in Japanese) Soil Surface

② Soil(TSUCHI in Japanese) design connect inside and outside, nature and civilization.

③Connection(TSUNAGI in Japanese) with SOIL(TSUCHI)

## TSUCHINAGI

#### KEY of the DESIGN 1

#### 1.Color of Soil harmonizing with natural element





TG-2103 (Red Clay)



TG-2102 (Dry Soil)



TG-2104 (Ocher)

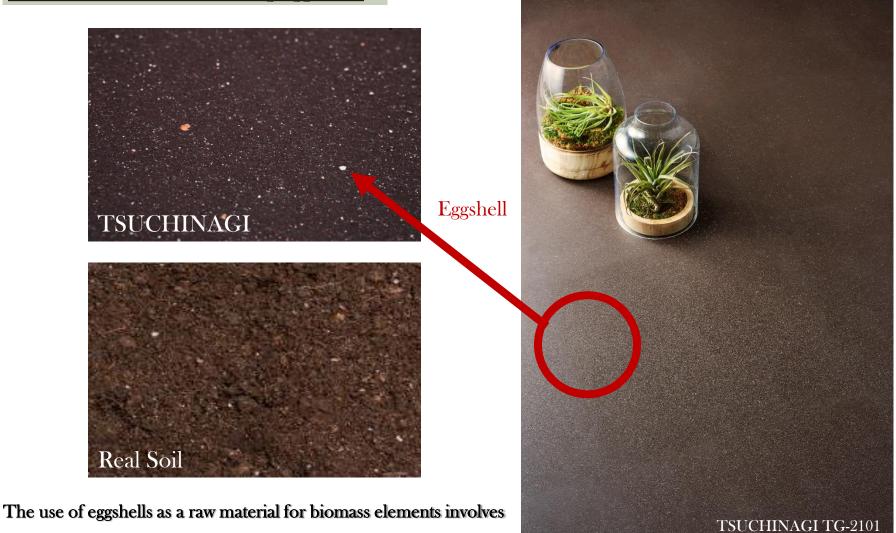
TSUCHINAGI offers four color options: wet forest soil, dry earthy soil, and red and yellow soil rich in iron oxide. These diverse color variations provide the flexibility to choose the most fitting option based on the desired aesthetic for a space.





#### KEY of the DESIGN 2

#### 2. Realistic soil texture using eggshells





The use of eggshells as a raw material for biomass elements involves incorporating larger particles to materialize their natural texture, expressing the realistic appearance of soil with its fine grains.

#### 3. Its pattern gives seamless impression on spaces.

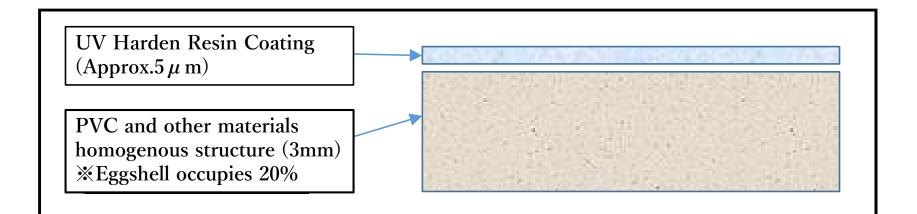


With its nearly plain, flowing pattern, the visibility of joints between tiles is minimized, yet it maintains a non-monotonous aesthetic. The patterns convey a delicate sense of distinctive irregularity, creating the impression of a earthy surface that covers the entire floor.





A Vinyl Composition Tile, which features a distinctive grain pattern design, created using large-diameter eggshells as a biomass raw material.



Product Classification	Vinyl Composition Tile
Size	457.2x457.2mm
Thickness	3.0mm
Colors	4
Sales Start Date	21 <sup>st</sup> December 2023



Since eggshells are incorporated throughout the entire tile, the grain pattern extends across the entire layer. This pattern remains visible over time, ensuring it won't vanish from the surface.





## **Recycled** material

20 percent of TSUCHUNAGI is made of eggshells, one tile contains the shells of 25 eggs. Counting the other recycled material, more than 30% of the raw materials are recycled materials from outside the company.

## **Reduction of CO2 emission**

Approximately 250,000 tons of eggshells are disposed of each year in Japan, which are incinerated or landfilled. By using eggshells as raw materials for our products, the need for incineration and landfill disposal is eliminated and CO2 emissions are reduced.



By using eggshells as a raw material, we obtained the biomass mark approval.



#### **BIOMASS MARK**

This marker signifies environmentally-friendly products that make use of biological resources (biomass) and meet the quality and safety standards outlined in relevant laws, regulations, and specifications in Japan.

#### **\***Definition of Biomass

Organic resources of renewable biological origin, excluding fossil resources. However, inorganic resources such as shells produced directly by living organisms are included.

(Ref: https://www.jora.jp/)



#### PRODUCT CHARACTERISTICS : TECHNICAL CHARACTERISTICS

### JIS certification will be obtained, and the main physical properties will be equivalent to those of the current composition tiles.

Test Items		Unit	Result	Requirement	
Indentation		23°C	mm	0.26	≧0.15
		45°C		0.50	≦0.80
Residual	Indentation	Method A	mm	0.06	$\leq$ 0.25
Dimensional stability after		length	%	-0.04	$\ge$ -0.20 $\le$ 0.20
exposure to heat	width	-0.01			
Dimensional stability after immersion in water		length	%	+0.05	$\ge$ -0.20 $\le$ 0.20
		width		+0.06	
Slipperiness dry		(C.S.R)	0.88	—	
Abrasion		mm	0.25	—	
Staining	2% sodium h	ydroxide solution		No change	
	5% hydrochloric acid solution Cement paste			No change	No change
				No change	

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Can eggshells become moldy?	Eggshells are cleaned and heat-dried. In addition, since more than 90% of the ingredients are calcium carbonate, there is no mold formation.
Are there any salmonella (or any other harmful bacteria) in eggshells?	The eggshells undergo a cleaning and heat- drying process, effectively eliminating Salmonella and other bacteria."
Is there significant size difference in the grain pattern? Is the grain size stable?	Variations in the size and quantity of visible grains may occur. This is a result of minimizing energy consumption in the milling process to reduce environmental impact, given that eggshells are a biological raw material. For customers who place a high value on the grain pattern, it is strongly recommend to order the same production batch.



#### Message from the person in charge in Product Development

We assume the greatest appeal of TSUCHINAGI lies in its harmonization with natural objects. In other words, TSUCHINAGI is truly complete when combined with these natural elements. We would be happy if visitors to a space with TSUCHINAGI feel more comfortable than usual.

Tajima Roofing Inc. Product Development Dept. Tile Group Takeru Kojima