

Luxury Vinyl Tile Changes the Path of Tile Industry

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Dawn of a “New Tile”...

A new era begins in the floor tile industry with LVT (Luxury Vinyl Tile) flooring. This tile is made using Limestone and Polyvinyl Chloride as key raw materials. As an eco-friendly product, these tiles are 100% recyclable, making it an ideal, sustainable product for the environment conscious consumer. LVT is made in full compliance with international REACH and ROHS regulations. The product range is offered in two thickness ranges (2 mm & 3 mm), while offering the consumer a wide array of design choices to choose from. Whilst offering a superior value proposition, the tiles are priced at an attractive range, highlighting their excellent value-for-money prospects.

What is LVT

LVT (Luxury Vinyl Tile) is the latest development and most eco-friendly product in the tile industry. That is widely used in European countries. LVT floor appears as real wood / stone and has a wide range of designs embossed. It is manufactured in several shapes of planks and tiles. Though LVT is still a relatively new product, it has been gaining notable market share in many Asian and European countries.

Construction Of LVT

LVT is commonly made from multiple layers of PVC

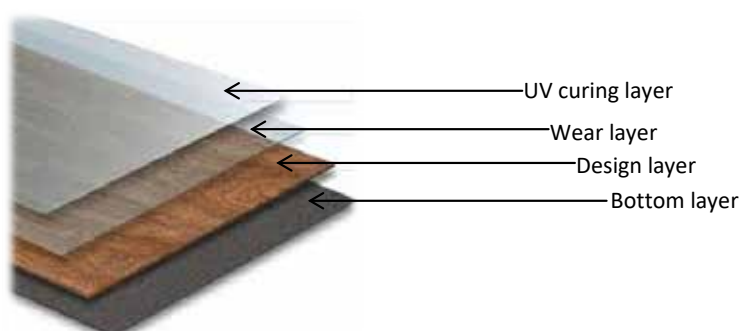


Figure 2: Layers of LVT

vinyl and other protective coatings.

These layers have special properties to improve the product quality.

UV Curing Layer

This is the topmost layer of the LVT. It acts as a protecting coat to minimize wear of the product. Matte/ Gloss finishing availability, scratch resistance, low volatility and anti-slip properties are other key benefits from this layer.

Wear Layer

The Wear Layer is simply an extra layer of protection placed between the printed design of the vinyl plank or tile flooring material and the UV Curing Layer at the top. This is the layer that is subject to wear when the tile is being used. 20 – 28 mil ratings are typically suited for higher foot traffic and commercial areas. The UV Curing Layer is applied on this Wear Layer.

Design Layer

The Design Layer is the printed decorative film that allows the LVT to look luxurious! With several years of technological advancements and R&D breakthroughs, LVT tiles are made to be ever more realistic, thanks to enhanced technologies in printing and embossing.

Bottom Layer

This is the fundamental layer of the product. This layer is made up of harder materials as this is the part which maintains the structural stability of the LVT. Glue is applied to bottom of the layer for adhesion purposes. Furthermore, the bottom layer features a diamond pattern to increase the surface area for better bonding with the installed floor, also for ease of laying. The product thickness is dependent on the thickness of this layer.



Figure 1: Product Range

Benefits of LVT

- 100% Recyclable
 - Eco-friendly
 - Cost efficient
 - Waterproof
 - Durable
 - Softer than tiles
 - Provides warmth than tiles
 - Wide range of designs
 - Easy to clean
 - Easy to lay
- Rich look – LVT, by popular demand, is mostly available in natural wood and stone designs. The designs are endless and there is as large variety of vivid, photo realistic natural timber textures to choose from. LVT designs carry a sharper finish and a richer look compared to a porcelain tile with a similar print on it. The aesthetic appeal is what makes LVT top choice for homes, offices and commercial premises.
 - Affordable Luxury – The Vinyl plank costs less than the porcelain ceramic tile of similar standards and dimensions. The installation costs are significantly less as most of the vinyl tiles can be glued down or interlocked, making the installation fast and easy in addition to being cost effective.
 - Durability – While both LVT and floor tiles are durable, what makes LVT stand out is the fact that it doesn't break when heavy objects fall on it. LVT doesn't chip, break or form cracks, unlike the porcelain tile. The thick Wear Layer (usually 0.50 mm and above) as well as UV Curing Layer will ensure that the wearing of the product occurs at a very low rate. The icing on the cake when it comes to LVT is that, even scratch marks are almost non visible.
 - Hygiene – LVT floors do not have grout lines, unlike porcelain tiled floors. Grout lines are where dirt accumulates and bacteria / fungus start to grow. Due to machine cut, high precision LVT tiles, the tight-fitting LVT floor overcomes this issue and stands out as the most hygienic solution. It's one of the main reasons most hospitals and healthcare facilities mandate the usage of Vinyl flooring. In most hospitals, sheet Vinyl is used with seam welding to ensure that there are no joints present. In addition to this plethora of benefits, Vinyl flooring is waterproof as well. The floor could be mopped any number of times per day and spills could be cleaned rapidly. In contract, Porcelain tiles are generally not waterproof and have varying degrees of porosity. They are also not stain proof unlike the vinyl counterpart due to this reason.
 - Comfort – LVT is a very comfortable solution, as it is not as hard as the Porcelain tile. Due to this reason, LVT floors have the ability to mute footstep noise when walking over, unlike the Porcelain floors. There is also the comfort of knowing that Vinyl has less environmental impact. LVT flooring products could be completely recycled into new Vinyl floor products. In contrast, end-of-life Porcelain flooring products end up in landfills most of the time.

Our Product specification (LVT)

Characteristics	Standards	Specification	
Total Thickness	EN ISO 24346	2,00 mm	3,00 mm
Wear Layer Thickness	EN ISO 24340	0,50 mm	0,50 mm
Dimension of Plank	EN ISO 24342	6' x 36" 152,4mm X 914,4mm	6' x 36" 152,4mm X 914,4mm
Weight of Plank	g/sq.ft	300	450
Gloss Value (Matt)	ISO 2813:2014	5	5
Dimensional Stability	ASTM F2199	Pass	Pass
Pass Hardness Shore D	ISO 7619:2010	>55	>55
Abrasion Resistance	EN 660-2	Group T	Group T
Resistance to Chemicals	EN ISO 26987	1	1
Reaction to Fire	EN ISO 11925-2	Class Bf1-s1	Class Bf1-s1
Castor Chair Test	ISO 4918	OK	OK
Thermal Conductivity	EN ISO 10456	0.25 W/(m.K)	0.25 W/(m.K)

Table 1: Product Specification

Trending of LVT

LVT could be laid on any surface. It is installed on to the floor by the use of a special adhesive. Glue must be applied on the top of the surface and back side of the LVT and leave for 20 minutes to dry. Then it is installed on to the floor by pressing on the surface. A special advantage of LVT is that it can be laid on ceramic tiles



Figure 3: LVT in Marble Tile

directly. This product could also be used for Bathrooms as LVT product is waterproof.

LVT is a great choice for Office Rooms, Restaurants, hotels, Bed Rooms, Kitchen etc... Being a chemical resistant product, LVT does not degrade / fade upon getting into contact with oils and detergents.



Figure 4: Mix LVT



Figure 5 : LVT for Bath Room



Figure 6: Wall Decorate With LVT



Figure 7: Kitchen with LVT

Research and Development side of the LVT

This product is produced as per international ROSH and REACH regulations in order to acquire export access to Europe countries. In REACH regulation, it restricts nominated chemicals that is hazardous to human health therefore, we implement strict monitoring of our raw material selection / usage.

There are several properties we constantly monitor while manufacturing LVT.

- Dimensional stability

As a product that could be used in different environments, it never subjected to shrinking or expand with the variations of temperature.

- Deformation

Deformation can be long term and short term. LVT have ability for recover from a certain degree of deformation after the deforming force is released from the product.

- Bonding strength

Bonding between LVT layers is a critical factor. We use several techniques to increase the bond between layers. We have pioneered our production process to ensure that there is no layer separation after the manufacturing is completed.

LVT could be installed on a floor in any condition (wet environment, dry environment, smooth surface and rough surface) because of the excellent bonding properties of the glue.

- Thickness

Punch resistant, Dimensional stability, wear resistant can be increase with the thickness. The thickness will vary with the area of LVT laying. If the area has higher foot traffic it is better to lay high thickness LVT. We have skilled technicians who are well capable of inspecting the customer's floor

and offer customized, specialist advice as per your requirement.

- Chemical resistant

LVT is a chemical resistant product. Detergents, soap, lime, vinegar, grease and oil are the some of chemicals that we use frequently. LVT has the special ability to be non-reactive with these substances, and as a result, is not subject to fading or degradation.

Recyclable product



Figure 84: Recycle Logo

LVT is a 100% recyclable product. Any type of PVC scrap material could be utilized to manufacture LVT. With Global Vinyl's scrap recycling capabilities, the process waste that is generated from the manufacture of LVT and other PVC scrap shall be recycled in-house. We are delighted to declare that Global Vinyl is an environment friendly PVC base product manufacturer in Sri Lanka.

About Global Vinyl:

Global Vinyl (PVT) LTD has 30 years of proud history as the leading manufacturer of Vinyl flooring and synthetic leather in Sri Lanka. The company manufactures a wide variety of products such as Tarpaulin, roofing felt, Homogeneous vinyl flooring, Synthetic leather and car matting.



Figure 9: LVT



Figure 10: Tarpaulin



Figure 11: Homogenous vinyl flooring

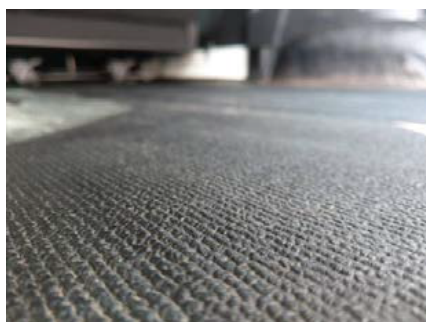


Figure 12: Car matting



Figure 13: Synthetic leather



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