

Principle™

Beautiful tiles made from 91.3% recycled materials



Available in four unique colours inspired by Victorian tiles from the turn of the century. The Principle range is in a modern brick slip format and uses a thick application of transparent glaze to produce a highly glossy tile.

Principle is Alusid's first mass produced tile which has been made exclusively for Topps Tiles™ using a tile body made from 95% recycled materials. It's the first of a range of products that Alusid is producing to reduce the impact of the tile industry by applying its unique technology to make desirable recycled tiles.

Principle™ White

Made from 91.3% recycled materials

Our tile body is made from raw materials that are 95% recycled, we use an industry standard glaze to give us a final product that is 91.3% recycled amongst the highest percentage recycled ceramic tile in the world.

All of the recycled materials we use are by-products of industrial manufacturing sourced from other companies who are unable to reuse them within the existing process or it represents too high a risk of contamination. In many cases the materials are sludges or very fine particles which are difficult for our suppliers to reuse.

What makes Principle different?

From the outset, our manufacturing processes have been designed to minimise environmental impact, with the aim being to produce tiles and architectural surfaces that have a much lower carbon footprint than ceramic products made by conventional manufacturing methods. All our products, are made almost entirely from low value recycled industrial waste, much of which may have been otherwise destined for landfill. Using recycled waste, rather than virgin raw materials, also reduces the environmental damage caused by the mining and extraction of raw materials.


Principle's tile body is made from 95% recycled material - one of the highest percentages on the market. We source waste direct from other ceramic industries and from glass recycling. Typically these materials are used for low value applications such as fiber glass or as fillers in concrete, in some cases the materials end up going to landfill.

However, these materials have a high amount of embodied energy as a result of the processing they go through in their formation in other industries. By combining them in specific ratios we are able to produce a tile that can be fired at a lower temperature compared to standard tiles. Our tiles are fired at 50°C lower than the same products.


Every m² of Principle™ produced diverts up to 8kg from landfill

Unique tiles formed by unique raw materials


The glass in our tiles comes from soda lime glass, this is a by-product from municipal recycling of household container and window glass. The small particles of glass in the tile melt during the production process and produce small bubbles and interact with the glaze to add extra depth in the tile surface and glaze, this process makes the surface shimmer and reflect light in ways that are different from an standard ceramic tile body.




Recycled sludge from tableware manufacture



Porcelain edge grinding dust from floor tile manufacture



Recycled soda lime glass from containers and float glass recycling



Vitrified waste from refractory industry

Principle™



Principle™ Blue

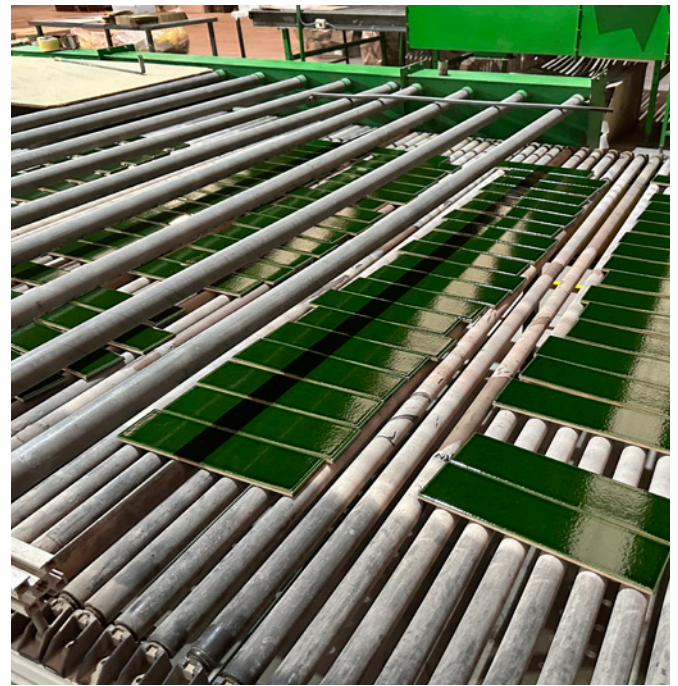


Principle™ Amber



Efficient industry standard production processes

Full scale production and precise management of raw materials enables repeatable consistent results. While its important to make our products beautiful, we also have to make them at scale, but we didn't want to reinvent the wheel and use precious resources to build a factory. So we have worked hard over the last few years to engineer the recycled materials we use to allow us to manufacture our tiles on existing production equipment. This means we are able to deliver a consistent product at a competitive price for such a unique product.



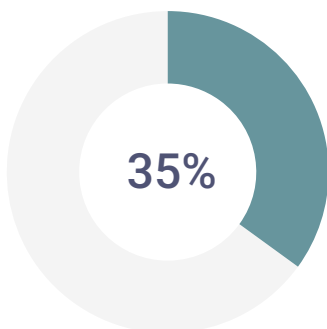
What does the future hold?

We are currently working on scaling a method of production using selected recycled materials from one of the worlds largest raw material suppliers that will allow us to produce high volumes of ceramic tiles using significantly less energy compared to the existing technology.

By reducing the firing temperature and using a dry processing technology we are projecting an energy saving of approximately 35%. Our process also uses up to 75% less water than existing ceramic tile manufacturing processes. This would translate to a saving of approximately 4.5kg of CO² per m² of tiles produced. This new method will also allow us to increase the recycled percentage to at least 95% for the whole tile

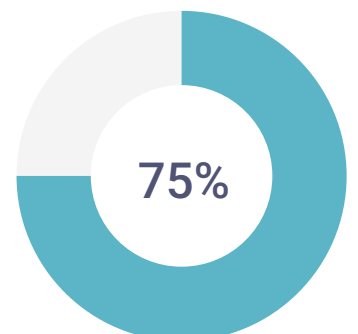
Energy Saving*

Up to 35% Energy Saving



By eliminating spray drying and firing at a lower temperature we can reduce the energy used by up to 35% when deployed at full scale. For our planned floor tile, the savings could be even higher.

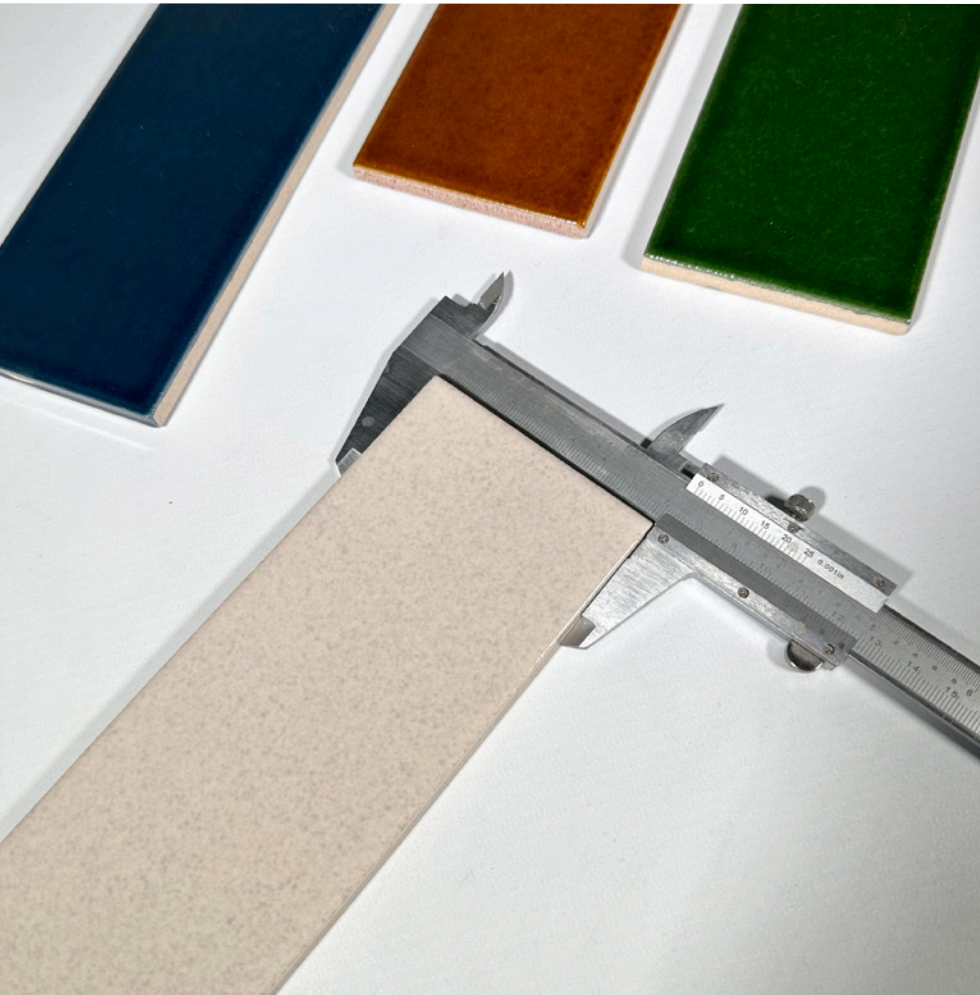
Water Saving



*Source: **Projection** based on EU Ceram Unie and SACMI data in comparison with like for like, small format tiles produced at large scale using dry blend method

Easy to install with standard equipment

We don't believe that people will buy sustainable products if they aren't desirable and beautiful. But we also don't think they will compromise on how they are used. Our wall tiles can be cut using standard tile equipment and can be installed with standard adhesives and grouts.



Recycled high quality ceramic tiles

All of Alusid's tiles are independently tested to conform with all UKCA and European CE standards. Batches are all tightly controlled and colour variation is within normal ceramic tolerances.



About Alusid

Alusid originally started its life as a research project called the 'Aesthetic of Waste' at the University of Central Lancashire, England by Professor David Binns and Dr Alasdair Bremner. Which considered the possibilities of low-value materials destined for landfill and whether they could be transformed into beautiful, high-end products for the architectural and interior market.

Their research project led to the formation of Alusid - an award winning company specialising in production and development of a variety of architectural products from tiles and feature walls to solid surfaces and furniture. Alusid has been at the forefront of the ceramic recycling industry developing a number of products and working with some of the major names in the business to source material and produce products.

After over 6 years of research and development working with experts in the tile industry they are now ready to bring to market their first tile mass produced recycled tile to the market.

Principle™

The Principle tile body is made with 95% recycled materials glazed in a range of 4 traditional colours the final product is 91.3% recycled.

Colours



GREEN

Gloss Varied Glaze



AMBER

Gloss Varied Glaze



WHITE

Gloss Varied Glaze



BLUE

Gloss Varied Glaze

Size

293MM X 73MM X 8MM



Specifications

CLASSIFICATION	BIII	THERMAL SHOCK	No evidence of damage
WATER ABSORPTION	7%	BOND STRENGTH	Resin - 6.4N/mm ² / Dispersion - 2.4N/mm ²
TILE LINEAR DIMENSIONS	+/- 0.3%	REQUIRES SEALING	Yes
DIMENSION RECTANGULARITY	0.71%	INDOOR USE	Yes
MAX THICKNESS DEVIATION	+/- 0.4mm	OUTDOOR USE	No
STAIN RESISTANCE	Class 5	THERMAL EXPANSION	N/A
REACTION TO FIRE (CWT)	A1		

www.alusid.co.uk
info@alusid.co.uk
follow us on social @alusiduk

email: info@alusid.co.uk
Tel: +44(0) 1772429275

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