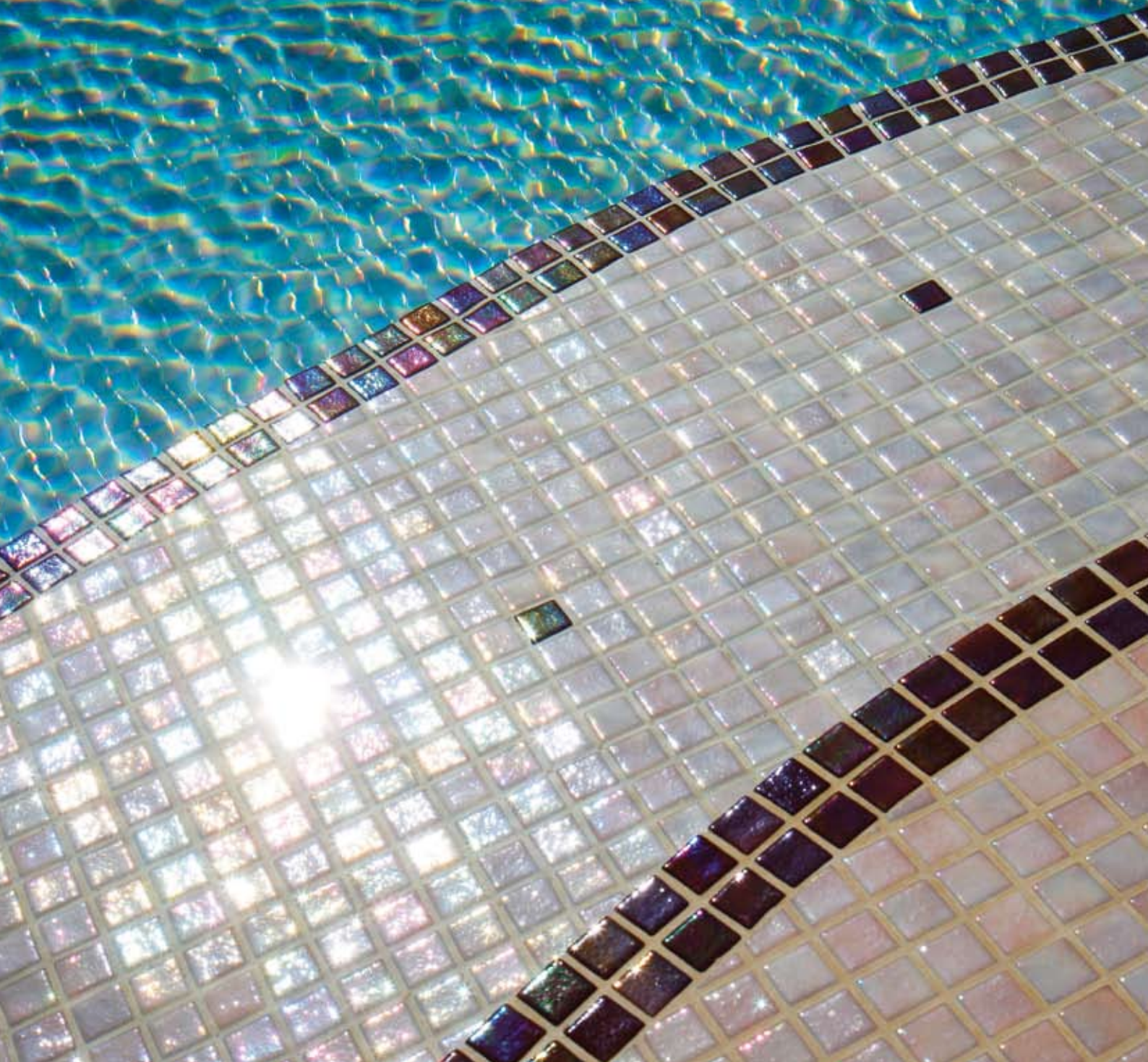


Glass: a distinctive, sustainable material

The advantages of mosaic increase the design possibilities for contemporary glass products.





According to Pliny, the ancient Roman historian, Phoenician stone merchants accidentally discovered glass when they set sail to Syria around 5000 BC. Pliny records that when the merchants landed in Syria and placed cooking pots on small blocks of nitrate positioned by their fires, the intense heat caused the blocks to melt and mix with sand on the beach, forming an opaque liquid.

Because glass can form when certain types of rock melt during volcanic eruptions, natural glass existed well before the Phoenicians' time. Stone-age man is credited with using obsidian – a glass of volcanic origin – as a cutting implement. Man-made objects formed from glass, such as beads, date back to around 3500 BC, when the ancient Mesopotamians and Egyptians first experimented with this material.

The Greek (Byzantine) and Roman civilisations were probably the first to use glass to create mosaic. The Romans in particular introduced elements of stone, metal, pebbles and glass into works created by mosaicists who travelled throughout the empire introducing the art of decorative mosaic to conquered peoples. By 200 AD, the development of tesserae, the first manufactured mosaics, inspired the creation of fantastic historic and religious works of art.

Then, as now, glass was frequently used to add colour and decoration. The Byzantines are credited with the production of smalti – rough-textured, coloured glass tiles which were extensively used to decorate the walls, ceilings and façades of palaces.

At virtually every juncture in history, artists and architects have been inspired to use the brilliance of glass to add colour and vivacity

LEFT: Iris, a new series of glass mosaics from Ezarri, is available exclusively from Renaissance Tiles, NSW (shown here in Nacar and Cobre). Manufactured from recycled pure glass, Ezarri mosaics are especially suited for use in wet areas. **ABOVE:** Sicis mosaics are manufactured in Ravenna, Italy. Special art pieces are created by the company's Artisans department. Elite Bathware, Qld, is currently developing a new showroom dedicated to these materials.





ABOVE: Most ceramic tiles fixed more than three metres above ground are installed mechanically.

The exterior of the Hotel Les Fleurs in Sofia, Bulgaria, illustrates how a CAD-created, lightweight, flexible mosaic design can capture the imagination. (Image courtesy of Trend Mosaics Australia).

TOP RIGHT: The popularity of combining colourful glass mosaic with ceramic tile is illustrated by a striking combination of Decoramics' new Carnival, a 300 x 50 mm random glass band of colour, with 450 x 450 mm tiles. Glass mosaic is not limited in size to 25 x 25 mm tesserae. **BOTTOM RIGHT:** The Ventaglio glass mosaic fan is an intriguing product available in 30 colours, including pearlescent and precious metals, and plain and textured finishes from Academy Tiles, NSW.

to their designs. Stained glass was particularly popular during the nineteenth and early twentieth centuries. During this period the use of glass tile diminished, but at the turn of the twenty-first century, the popularity of mosaic is now well-established.

Glass mosaic is used in the production of furniture, jewellery, works of art and, of course, in all types of internal and external living spaces or entertainment areas. It is also frequently combined with elements of stone, ceramic and metal to provide specifiers with even greater options for producing stunning designs.

In ancient times the potential for using small, relatively lightweight materials on ceilings and walls had great appeal, particularly on curved surfaces. In that regard, nothing has changed. Mosaic remains the most flexible tile thanks to its capacity to be used on curved or irregular substrates.

The product's flexibility has few limitations, and its design potential is unlimited. It can be used to create vertical or horizontal strips or bands of decoration. The simple act of replacing one cube of mosaic in a sheet with one of a different colour creates a novel pattern. The vast possibilities for adventurous use of mosaic are further enhanced by the availability of an array of bright and brilliant colours.

Design potential is augmented by the possibility of creating unique, computer-aided designs which can be developed from a simple drawing or photograph supplied by a client or a designer.

Custom-made digital designs can be produced and electronically transmitted to the client for approval or amendment, before each sheet is precisely formed and packaged for delivery. On-site installation is made easy by numbered sheets corresponding to a detailed map of the final image.

Types of glass and their applications

Vitreous glass mosaic is the most durable, hard-wearing type of glass. The product is generally produced with a hard, flat surface finish. These materials can be used outdoors, and are particularly popular in swimming pools and as a façade material.

Iridescent glass mosaic features a coating which enhances the reflection of different colour values. This type of product is typically used in clubs, bars and casinos. This attractive product is usually restricted to use on walls only because the iridescent coating can scratch or fade.

Metallic glass is a type of mosaic featuring colour melted into the molten glass at high temperature to provide fascinating colour effects. These products can be introduced into fields of compatible glass mosaic for decorative effect.

Crystal glass describes transparent glass tiles that have a kiln-fired coloured glazed backing, which provides added colour depth to these acid-resistant products. They are suitable for use on interior and exterior walls.





ABOVE: Matrix Chilli is part of an array of 800 products from Southern Cross Ceramics that provides architects, designers and resellers with opportunities to combine glass with tile or stone. **RIGHT:** Pure glass tiles are becoming larger like their ceramic counterparts. Everstone produces a comprehensive range of glass mosaics and tiles, including these 300 x 600 mm glossy glass tiles.

Added advantages

In addition to its sheer flexibility, glass has a number of added advantages, including its wide availability in hard-to-find colours. The wide availability of complementary colour grouts also ensures that effective colour proposals and impervious mosaic tile compositions can be achieved.

In this day and age, where sustainability is a watch word for all specifiers, it is interesting to note that a number of companies, such as Ezarri, recycle all their glass. In fact, a square metre of recycled glass consumes only 50 per cent of the energy required to make a similar quantity of ceramic tiles.

Glass also boasts a zero absorption rate, so material shrinkage or expansion is not an issue. The durability of glass is well documented. Cementitious coatings used in swimming pools are certainly a cheaper initial option, but in time the colour will fade and the surface will appear jaded in comparison to well-fixed and grouted glass mosaic.

The popularity of glass is increasing in many markets. Remarkably, Australia was one of the first countries to recognise glass as a contemporary decorative material and a number of companies – in particular, Artistic Stone, Bisazza, Decoramics, Everstone, Gasparee, Renaissance Tiles, Silkstone, Southern Cross Ceramics and, more recently, Trend Australasia – have become established market players.

Of course, interest in glass is not restricted solely to mosaic. Glass tiles, including relatively large-format products and delicately fired products encased in layers of vetrosa glass, have also captured attention. The potential for creating a unique design or a compelling band of bright decoration will ensure that glass retains its pre-eminent position in the panoply of decorative wall and floor finishes. **TT** Anthony Stock

