

## Characteristics of PolyVision's e<sup>3</sup> environmental ceramicsteel™



### Sustainable, environmentally certified and longest lasting

e<sup>3</sup> environmental ceramicsteel by PolyVision is recyclable and free of heavy metals. e<sup>3</sup> helps you maximize on your investment with its Forever Warranty™ (30+ years)—extending the life span of the structure and reducing the need for refurbishment.



### Heat and fire resistance

Vitreous enamel steel is resistant to heat, flames or fire up to 650 °C and continuous temperatures up to 400 °C, vitreous enamel steel does not support the spread of flames or smoke (incombustible) and does not give off any toxic gasses.



### Color variety

e<sup>3</sup> environmental ceramicsteel is available in a wide range of colors and gloss levels.



### Vandalism, impact and chemical resistance

The extreme hardness of the surface makes it very difficult to permanently mark with knives or keys. Enamel is resistant to most alkali, all acids (except hydrofluoric acid), all organic solvents, normal detergents (pH >7), all neutral saline solutions (pH = 7) and is unaffected by kerosene. Graffiti applied by markers and pens can be easily removed with the appropriate detergent and water.



### Color quality

Porcelain enameled steel is resistant to fading, ultra violet (UV) radiation, industrial pollutants, sea salt, and hail. In addition, we guarantee that there will never be a difference in color tones between production lots. Our color variance between production lots is ΔE 1.0; this variance is undetectable by the human eye.



### Resistance to thermal shock

Resistant to extreme temperature differentials of between 450 °C to - 40 °C, vitreous enamel steel can withstand rapid cooling, from 400 °C to room temperature over a 30 second period.



### Resistance to corrosion

Both sides of the steel are enameled, ensuring that potential damage to the steel is avoided and the structural integrity of the steel is therefore maintained. Surface does not corrode even in extreme marine conditions.



### Resistance to abrasion

The surface hardness is very similar to that of glass. Vitreous enamel, using Mohs' scale, has an average rating of 6.7. On the same scale marble has a rating of 3.0 and diamonds of 10.0. This property allows the surface to resist mechanical abrasion and prevent scratching, either accidental or intentional.



### Hygienic

e<sup>3</sup> environmental ceramicsteel's non porous characteristics prohibit the absorption of dirt and grease, and prevents the growth of bacteria and mold. Independent comparative studies have shown that, in this respect, enamel outperforms other materials and coatings, including stainless steel. Vitrified steel does not absorb or transmit odors or flavors.



### Design versatility

Architects and designers can incorporate vitreous enamel steel designs of almost any shape, within their designs.



### Low maintenance

The surface is easy to care for, resulting in lower maintenance and refurbishment costs.



### Vermin-proof

Vitreous enamel steel is impervious to attack and damage by rodents and insects.



### Dielectric properties

Enamel has a high degree of electrical resistance and acts as an excellent insulator. The ability to prevent or block stray currents enables the enamel coating to protect the steel from corrosion.