



VITREX

UNIQUE PRODUCTS, PASSIONATE PEOPLE

COMPANY PROFILE



WELCOME TO VITREX

Enamelling is one of the oldest techniques known to man, with origins that date back over 4000 years, as evidenced by the jewellery and decorative art created by the ancient Egyptians, Persians and Greeks.

Vitreous Enamel Steel allows for the functional and aesthetic attributes of glass to be combined with the strength and fabrication flexibility of steel. Created when an inorganic glass-like coating is fused to a steel substrate at controlled temperatures of around 820°C, the physical and chemical bond formed between these two very different elements results in one of the most resistant, easy-to-maintain and long-lasting materials, renowned the world over for its exceptional strength and longevity.

Vitrex (Pty) Ltd is a leading South African manufacturer of a broad range of vitreous enamel steel architectural products, from purpose made and engineered elements such as architectural cladding, enamel signs and cloakroom cubicles, to commodity products such as chalk boards, white writing boards and pin boards.

The origins of our company can be traced back to Hendler Seaporcel, a subsidiary of Hendler Ltd, then a large family owned company, which had, since the mid 1950's, manufactured vitreous enamel steel chalk boards and infill panels for curtain walls.

Vitrex was established in 1983 and today, this management-owned company, with a proven track record in the design, manufacture, supply and installation of vitreous enamel steel products, operates successfully throughout Africa, as well as in Europe, the Middle East and South East Asia.



Our Head Office and modern manufacturing facilities are located in Jet Park, Boksburg, Johannesburg.

A design office and drawing facilities provide the relevant technical assistance, whilst our plant includes high precision steel fabrication machinery, a specialised enamelling furnace, milling facilities for the preparation of all enamel formulations, as well as in-house laboratory facilities for development, quality control and testing purposes.

Vitrex has all of the design, project management and installation expertise to see any project from concept through to completion.

Our management system is certified in respect of ISO 9001 Quality Management and the company is currently working towards implementation and certification of the management system to ISO 14001 Environmental Management and ISO 18001 Occupational Health & Safety Management international standards.

Vitrex is a member of the The Vitreous Enamellers Society, formerly The Institute of Vitreous Enamellers (IVE), a UK-based technical institute for excellence in vitreous enamelling, the Steel and Engineering Industries Federation of South Africa (SEIFSA) and the Johannesburg Chamber of Commerce and Industry (JCCI).

WHY USE VITREOUS ENAMEL

Vitreous enamel is a unique and versatile coating that provides a practical solution to many design requirements.



Vitreous Enamel - Microscopic view

Vitreous enamel is applied as an inorganic, decorative and protective coating to enamelling quality steel, and then fired in a furnace at relatively high temperatures of around 820 °C. The chemical and physical bond between these two materials, which are so different from one another, results in the creation of an indeterminate boundary layer between the coating and the steel, which makes the bond virtually inseparable. The absence of a finite boundary layer and the fact that the steel is effectively 'encapsulated' in glass, ensures structural integrity and prevents potential damage to the steel.

FUNCTIONAL PROPERTIES OF VITREOUS ENAMEL:

Physical Properties:

- Incombustible
- Resistant to High Temperatures
- Resistance to Thermal Shock
- Unaffected bases, enamel does not release toxic gases and does not produce smoke

Chemical Properties:

- Resistant to corrosion (water, salt spray, soil)
- Resistant to atmospheric agents (UV, pollutants)
- Resistant to Chemicals (Acids, Alkalis, Solvents, Oils, Fuel, Sugar)
- Impermeable to liquids

Mechanical Properties:

- Scratch Resistant (MOHS 5 to 7)
- Resistant to Impact (Compressive Strength of vitreous enamel \pm 14MPa)
- Resistant to Vandalism (Graffiti, Knives, Keys)
- Resistant to Vermin

Hygiene Properties:

- Odours and flavours are not absorbed or transmitted
- Inhibits the proliferation of bacteria and mould
- Easy to clean

Environmental Properties:

- Low Maintenance (longer cleaning intervals, lower costs)
- Easy to clean (self-cleaning, no strong chemicals)
- Extremely long working life (well in excess of 35 years, lower refurbishment costs)
- Non toxic
- Recyclable

AESTHETIC PROPERTIES OF VITREOUS ENAMEL:

Vast Colour Range:

- Vitreous enamels can be coloured in a broad range of hues and shades
- Enamels are generally coloured using inorganic pigments or metal oxides, which are added to the frit during the grinding phase.
- Vitreous enamels exhibit a unique colour brilliance (gloss) which is regarded as an optical peculiarity
- Matt and semi-matt enamels can also be formulated and are favoured for specific applications

Colour Stability:

- Time, atmospheric agents, light and UV radiation do not alter enamel colours, which remain unchanged, without fading, turning yellow or losing their brilliance

Graphics and Special Effects:

- Enamel surfaces can be decorated using a variety of techniques (screening, decals etc) and can be used to incorporate the work of artists
- The ability to include graphics also has a functional aspect, as in the case of signage, for example.
- Special effects (metallic finishes, wood grain etc.) are also possible

BENEFITS OF VITREOUS ENAMEL



Variety of Colours
Shades and Finishes



Resistance
to Vandalism



Colour Stability
and UV Resistant



Incombustible and
Resistant to High
Temperatures



Corrosion
Resistant



Resistance to
Thermal Shock



Ultra
Hygienic



Vermin-proof



Scratch
Resistant



Long Working Life
and Low Maintenance
Costs



Impact
Resistant



Easy to Clean



Resistant
to Chemicals



Recyclable and
Non Toxic

Vitreous Enamel is a natural material, which is as pure as glass but strong as steel. Boasting a wide range of colours that retain clarity with time this versatile coating remains stable over time, regardless of atmospheric conditions. Vitreous Enamel is the practical solution to many design requirements and is fully recyclable at the end of its life cycle. Its exceptional properties make it fully resistant to high temperatures, shock, corrosion or chemical damage.



VITREX PRODUCT RANGE



Our range of vitreous enamel steel architectural products includes purpose made and engineered elements as well as commodity products:

- Chalk Boards, White Boards, Pin Boards, Projection Screens, Writing Panels and Writing Walls
- Modular Cloakroom Cubicles, Vanities and Bathroom Signage Panels (Vitraflex)
- Architectural Cladding (Vitraclad)
- Vitreous Enamel Steel Signs (VitraSign)

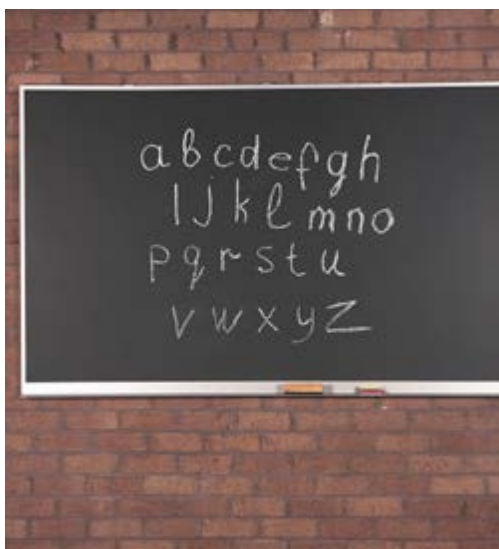
Vitrex offers a single source service, comprised of:

- Technical and costing expertise
- Advice at early design stage on details, feasibility and product specifications
- Colour development
- Design office and drawing facilities
- Fabrication, enamelling and assembly
- Testing of vitreous enamelled steel surfaces
- Installation



Over the years, our products have been successfully installed and used in a very wide variety of applications:

- Offices
- Shopping centers, restaurants and pubs
- Business parks.
- Hospitals and clinics
- Hotels, resorts, entertainment and convention centres
- Factories and manufacturing facilities
- Laboratories
- Mines and hostels
- Public ablution facilities
- Schools, colleges, universities and training centres
- Libraries and social centres
- Army and police camps
- Border posts
- Prisons
- Abattoirs
- Petrol stations and rest stops
- Airports, railway stations, underground stations, bus stations, taxi ranks, ports and harbours
- Churches and other places of worship
- Stadiums
- Sports Clubs, gyms and physical training centres





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