



The original home of
high-performance coatings

PEMCO International

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With over a century of innovation and craftsmanship, PEMCO International stands as a global leader in performance coatings. Established in 1911 by the Turk family in Baltimore, Maryland, our journey began with Porcelain Enamel coatings. Today, our portfolio has expanded to include a diverse range of products, such as Metallurgical Coatings, Glass Coatings, Forehearth Colourants, Refractory Glazes, and Extrusion Glass Lubricants. While Porcelain Enamels remain at the heart of what we do, our expertise extends across industries and applications.

Scan here
to learn more



Porcelain Enamels

Discover the expertise behind **PEMCO's** Porcelain Enamels

Our Porcelain Enamels are synonymous with durability, versatility, and innovation, making them a trusted choice for quality-critical applications worldwide. From our fully integrated facilities in Belgium, Italy, and the USA, we combine technical expertise with cutting-edge manufacturing processes to create products that meet the exacting standards of various markets.

At PEMCO, we don't just manufacture coatings – we enable our customers to achieve superior performance, empowering their success through products designed to withstand the most demanding environments. Let us be your partner in creating solutions that stand the test of time.

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Enamel Frits

Frits

Porcelain enamel is a ceramic coating made up of minerals processed into glass and fused with metal at high temperatures to create a protective and decorative layer on the metal substrate. Our porcelain enamel frits are suitable for steel, cast iron and aluminium substrates and are individually designed to address the complex variables of chemistry and end use application.

- Ground coat & cover coat frits
- Direct-on frits
- Nickel & cobalt free frits
- Vanadium containing frits
- Vanadium free frits

In addition to our core product range, we offer products with specialist properties including the following frit families:

- Pyrolytic frits
- Steam clean frits
- High chemical resistance frits
- Fish-scale resistant frits

Our product range of frits offer a full colour suite of Blacks, Browns, Blues, Greys, Whites, Transparent, Opaque, Semi-opaque and Majolica, and available in glossy or matt surface finishes.

Frit Mix - ready-to-mill

Our range of ready-to-mill frit mix products provides customers the added benefit of operational savings in the milling room, by removing the time it takes to blend frits together. Milling room operators simply empty the frit mix directly into the mill with the only addition of milling additives and pigments.

- Ground coat & cover coat frits
- Direct-on frits

Our ready-to-mill frit mix products are available in bulk packaging and custom formulated for each customer. We precisely measure, weigh and blend multiple frits, ensuring the same quality, colour and consistency with each and every batch.



Enamel Powders

Premix - ready-to-use

Premix is the next stage up from our frit mix products, and offer another level of convenience and cost benefit to our customers by skipping the milling room altogether! The advantages of our premix products include easier storage, less weight manipulations, less wastewater, and lower energy costs.

Our premix products are pre-milled powers containing frits, pigments, and additives, ready-to-use for wet application. The enamel slip is easily prepared by simply mixing the premix with water.

- Ground coat & cover coat enamels
- Direct-on enamels
- Catalytic self-cleaning enamels

Our technical expertise and know-how allows us to tailor each formulation for optimum performance within our customers operating conditions for different solution options, and available in various packaging including bulk, small bags and drums.

Electrostatic “Poesta” Powders

One of the most successful innovations in the porcelain enamelling industry has been the development and continued improvement of electrostatic powders. Our branded range of POESTA® electrostatic powders are ready-to-use powders for dry electrostatic application, avoiding the use of water during application.

Our Poesta® powders are continuously improved in partnership with powder booth manufacturers, and we adapt our powder characteristics to fit with the latest application technologies, which are especially preferred by the appliance market. Our direct-on Poesta® powders are available in a gloss or matt finish and offer a full range of colours including, Blacks, Blues, Browns, Greys, Whites, and various shades of light colours.

Milling Additives



Milling Additives

The type and number of mill additives that are used in a formulation, greatly depends on the enamelling process and the substrate to be enamelled. We offer a wide variety of mill additives, specially selected for their quality and superior properties and suitability for ready-to-use in our customers milling room.

- Clay
- Setting agents
- Refractory additions
- Opacifiers

Our specialist team of technical experts are available to guide and advise, which mill additions are required in combination with our enamel frits and pigments, to achieve the best possible rheological behaviour and characteristics of the slip and the desired finish of the enamel coating.

Pigments

We offer pigment oxides with excellent covering power, resilience against high firing temperatures, and stability against the chemical reactions during the enamelling process, whether in single or multiple firings. Almost all colours can be obtained using our frits in combination with calcined inorganic pigments. We offer a wide variety of pigments, which are specially selected for their quality and superior properties and can be used either pure or in combination.

- Spinel pigments
- Rutile pigments
- Cadmium pigments
- Pearl luster pigments

We offer a catalogue of formulations with our pigments, to achieve the most common RAL and Pantone colours and our technical team is on hand to formulate special colours. Our technical knowledge and longevity in the enamel market enables us to develop formulations obtaining a full and homogeneous colour and ensure all batches are carefully controlled across all of our global facilities, to provide our customers with the same consistent and reliable quality with each and every order.

Pigment Oxides



Vitreous Enamel Paste

Vitreous Enamel Pastes

Our Vitromail® branded range of decorative pastes is the perfect complementary product to our porcelain enamels, used for decoration and brand recognition on enamelled surfaces.

Vitromail® consists of finely milled pastes ground with oil or water-based mediums that can be applied to various enamelled surfaces. They are fired at slightly reduced temperatures compared to porcelain enamel firing, and specially adapted for different application types.

- Screen printed
- Flat surfaces
- Curved surfaces
- Transfer paper

We offer a colour palette of 22 standard pastes, which can be mixed to match a variety of colour preferences and our specialist team of technical experts are available to formulate special colours and desired finishes for the enamelled surface.



Porcelain Enamel Markets

Our expansive and diversified range of performance coatings are global market leaders for a variety of endmarket applications. We understand the intricacy of our customers' needs and tailor our products for optimum performance within customer's operating conditions. This insight is why we stand out against our competitors and provide lasting benefits to our customers.



Appliance



Our coatings are as durable as stainless steel but cost less. They satisfy the functional requirements of the industry but, importantly, also allow manufacturers to develop aesthetically pleasing and fashionable appliances for consumers. Our market knowledge is unrivalled, and our extensive product range offers enamel coatings for numerous types of appliances.

All our porcelain enamel coatings for cooking appliances are resistant to thermal shock, able to withstand high temperatures over long periods of time, scratch, and acid/alkali resistant and have superior resistance to bacteria growth compared with other home appliance finishes. Our enamel colour ranges are developed alongside industry designers to enhance the all-important visual appeal of the appliance on both the overall exterior and interior of oven cavities.

Our enamels can be specifically developed to possess different attributes, such as pyrolytic properties, and most recently added to our product range: high-temperature steam-cleaning enamels. Our laundry appliance specific porcelain enamels resist damage from laundry detergents and bleach, and due to the coating's durability, our enamels have excellent resistance to stains and abrasion.

Solution Options

- ☒ Ground coat / Direct-on frit and powders
- ☒ Cover coat frit and powders
- ☒ Cobalt & nickel free frit and powders

Key Applications

- ☒ Cookers
- ☒ Ovens
- ☒ Hobs
- ☒ Small household appliances
- ☒ Laundry

Architectural

PEMCO International is a global supplier to leading architectural manufacturers. We offer high-performance porcelain enamels, formulated to satisfy a wide variety of industry requirements and tailored to suit highly automated manufacturing processes. One of our core values is to create long-term partnerships with our customers by providing reliable quality through operational excellence, and consistency of supply.

Our porcelain enamels are used by architects for functional and aesthetic purposes and provide a non-combustible surface that is UV, corrosion, and abrasion resistant, and designed for easy graffiti removal. When applied on steel substrates, these long-lasting properties make them the best choice for a variety of architectural surfaces.

Our coatings feature a durable finish in a variety of colour options, making them a natural choice for metro stations, train stations, airports, and hospitals worldwide.

Solution Options

- ☒ Ground coat / Direct-on frit and powders
- ☒ Cover coat frit and powders
- ☒ Cobalt & nickel free frit and powders

Key Applications

- ☒ Building facades
- ☒ Tunnels
- ☒ Signages
- ☒ Marker boards
- ☒ Architectural panels
- ☒ Advertising panels

BBQ & Grills



Our porcelain enamels are designed to the highest standards of food contact safety and meet both the fashion and functional requirements of the barbecue market. The glossy or matte finish complements the tough and durable functionality of our coatings, which effortlessly withstand consistently high temperatures, making them suitable for a variety of barbecue and outdoor cookware appliances.

All our porcelain enamels provide essential protection against weather conditions with an easily-to-clean surface. Our coatings are resistant to thermal shock, scratches, can withstand high temperatures over long periods of time, and have superior resistance to bacterial growth compared with other finishes.

We are globally recognised for our high-quality and tailor-made product solutions, facilitated by our world-class global technical service teams, who develop our porcelain enamels for the global barbecue market in multiple colours to meet regional colour demands while maintaining the same durable and functional finish. We offer various solution options for wet and dry application.

Solution Options

- ☒ Ground coat / Direct-on frit and powders
- ☒ Cover coat frit and powders

Key Applications

- ☒ Barbecues
- ☒ Grates & accessories
- ☒ Grills & planchas



Boilers & Water Heaters

PEMCO International is a global supplier to some of the world's largest hot water tank, storage tank, and boiler manufacturers. We offer high-performance porcelain enamels formulated to satisfy a wide variety of industry requirements and tailored to suit highly automated manufacturing processes.

Our specially developed porcelain enamel coatings extend the lifetime guarantee of water heaters and boilers by protecting the inside of the steel tank against corrosion from the heated water. Our long-lasting enamels are suitable for both commercial and residential water heaters and boilers across a variety of applications.

Recognised worldwide, we deliver premium, customised product solutions supported by our world-class technical service teams. Our porcelain enamels are engineered to meet diverse regional requirements for global water heater manufacturers, offering versatile options for both wet and dry applications.

Solution Options

- ☒ Ground coat frit and powders
- ☒ Cover coat frit and powders

Key Applications

- ☒ Interior steel water tanks

Cookware

Our porcelain enamel coatings are staples in the cookware market. It is estimated that at least 1kg of PEMCO porcelain enamel is in every kitchen! Our expansive range of products continues to demonstrate their capacity to resist corrosion from household cleaners, abrasion, and the wear and tear of daily handling and are suitable for a variety of cookware metal substrates.

Our coatings are engineered to perform at the highest level, meeting both aesthetic and functional demands of cookware manufacturers. Our enamels are easy to keep clean and bacteria-resistant, keeping your cookware always looking showroom fresh, and fulfil all food contact safety regulations. Our expansive range of porcelain enamel finishes comes in a wide array of sparkling colours and special effects that are custom designed for each manufacturer, to ensure customer success through a positive reception in the marketplace.

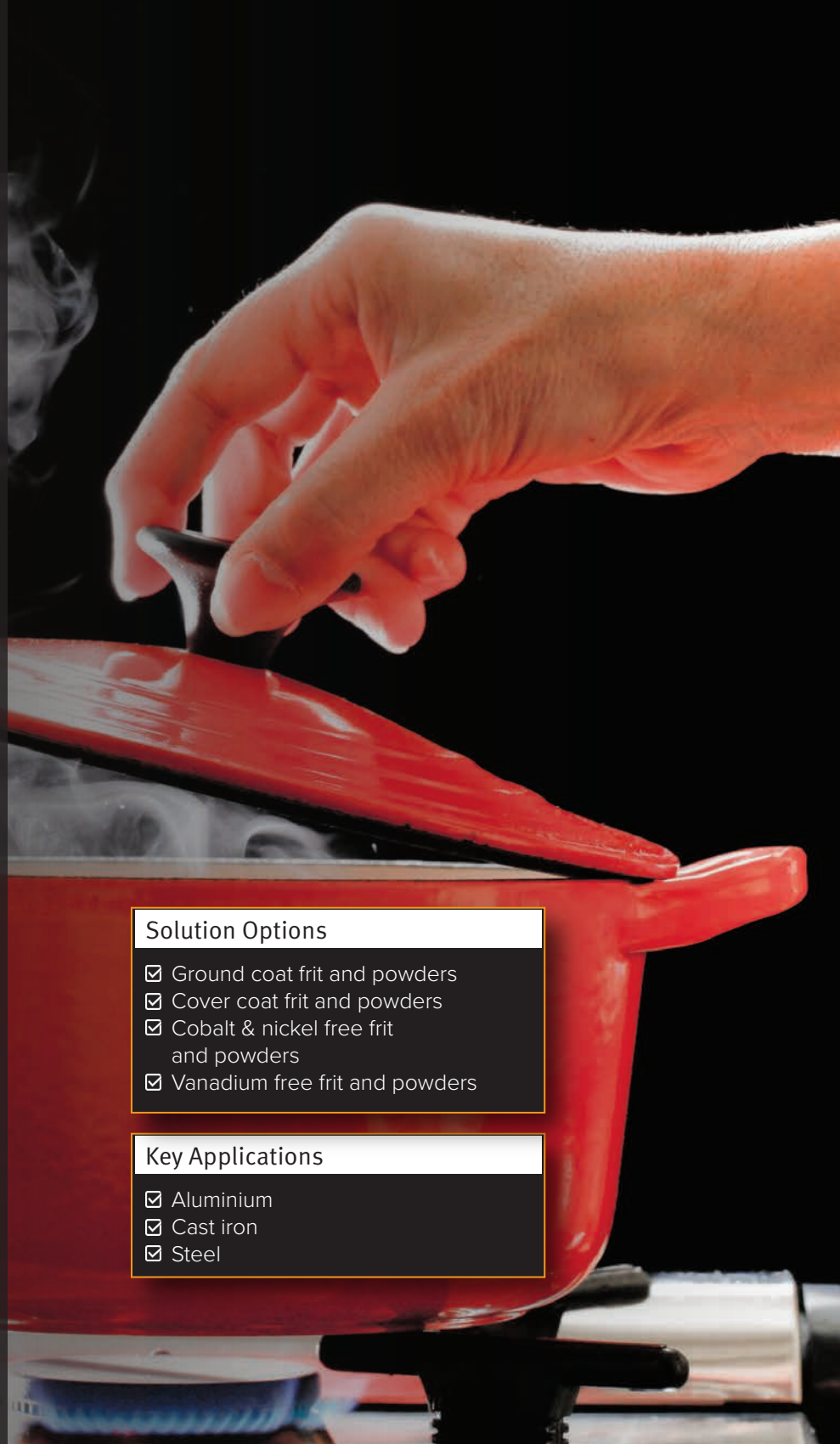
Every year, our world-class global technical service teams work with industry colour experts to forecast consumer colour trends ahead of the market. This proactive approach to colour development allows our customers to always be on trend. Our porcelain enamels are developed to perform within varying regional requirements for cookware manufacturers, and are available in a variety of solution options for wet application.

Solution Options

- ☒ Ground coat frit and powders
- ☒ Cover coat frit and powders
- ☒ Cobalt & nickel free frit and powders
- ☒ Vanadium free frit and powders

Key Applications

- ☒ Aluminium
- ☒ Cast iron
- ☒ Steel





Sanitaryware

Our porcelain enamels provide high-quality, reliable durability and non-fading colour surfaces for steel and cast iron sanitaryware. Our products are available in a wide range of colour options, whilst maintaining the same durable and functional finish required by the market's global standards, and are suitable for a variety of sanitaryware applications.

Our coatings are easy-to-clean and provide a protective surface that resists scratching, wear and tear, and corrosion from household scouring and cleaning.

We are globally recognised for our high quality and tailor-made product solutions, facilitated by our world-class global technical service teams who develop our porcelain enamels to perform within varying regional requirements for global sanitaryware manufacturers. Our products are available in a variety of solution options for wet and dry application.

Solution Options

- ☒ Ground coat / Direct-on frit and powders
- ☒ Cover coat frit and powders

Key Applications

- ☒ Sinks & wash bowls
- ☒ Bathtubs
- ☒ Shower trays

Silos, Tanks & Heat Exchangers

Our porcelain enamels are the premium technology in the storage tank market. The specially formulated glass enamel coating, forms a hard, inert barrier for both the interior and exterior tank surfaces, which provide critical chemical resistance and long-lasting durability against the harsh elements being used across a variety of applications.

Our porcelain enamels are specially developed coatings to protect the inside of the gas water heater flue pipes against the highly acidic conditions created by the combusive atmosphere of heating water. Our latest patented specialty ground coat enamel for silo panels provides extra fish scale resistance on construction steel.

Our coatings guard against weather, corrosion, and harsh chemicals and impermeable to liquids and vapours while controlling undercutting caused by corrosion and rust.

Solution Options

- ☒ Ground coat frit and powders
- ☒ Cover coat frit and powders

Key Applications

- ☒ Cast iron
- ☒ Steel

All Product Ranges

Porcelain Enamels | Glass Coatings | Foreheath Colourants | Metallurgical Glass

All Markets

Appliance | Architectural | Automotive | Barbecue & Grills
Boiler & Water Heaters | Cookware | Extrusion
Food & Beverage Containers | Refractory | Sanitaryware
Silos, Tanks & Heat Exchangers | Speciality



For further information on our globally recognised high-quality and tailor-made product solutions, please contact our world-class global technical service teams or visit our website.

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