

PROTECTIVE COATINGS

solutions that cover your needs



**SIGMA
COATINGS**

A PPG Brand

SIGMA *Guard* **TM**

Tank lining range



PPG Protective & Marine Coatings

The SigmaGuard™ Range

PPG Protective & Marine Coatings

Unrivalled performance and protection

PPG Protective & Marine Coatings (PMC) is a world leader in protective and marine coatings.

We create proven products that protect customers' assets in some of the world's most demanding markets including:

- Civil building
- Infrastructure
- Offshore
- Petrochemical
- Power
- Rail
- Marine new-build
- Marine dry dock
- Marine sea stock

Our coatings are unrivalled in performance and protection among asset owners, contractors, fabricators and applicators across the globe, helping customers meet the challenges they face today, and tomorrow.

Experience, innovation and integrity – that's what makes PMC the ideal coatings partner.

Sigma Coatings' world-beating tank linings provide long-term corrosion protection for all types of cargoes and stored products. The range includes solvent-free and solvent-based pure epoxy and phenolic epoxy coatings and zinc silicate tank coatings.

Typical applications are tanks storing oil, petrochemicals, biofuels, drinking water and raw sewage. Sigma Coatings' highly specialised coatings not only meet the operational needs of today's cargo and storage industries but also the demands of constantly evolving legislation.

Typical SigmaGuard™ applications

Petrochemical

- Land storage tanks
- Pipelines
- Waste water facilities

Infrastructure

- Waste water facilities

Offshore

- Drinking water tanks
- Pipelines
- Slop tanks

Power

- Land storage tanks

Performance you can trust

All our coatings are manufactured to world-leading standards. Our continuous innovation means that you can rely on a consistent performance from each and every coating in the SigmaGuard range.



Our protective coatings solutions for your storage tank requirements

PETROCHEMICALS

- NovaGuard 890
- NovaGuard 840
- SigmaGuard CSF 650
- PhenGuard 930/935/940
- SigmaGuard 730
- SigmaGuard 720

CHEMICALS

- NovaGuard 890
- NovaGuard 840
- PhenGuard 930/935/940
- SigmaGuard 790
- SigmaGuard 750
- SigmaGuard 730
- SigmaGuard 720

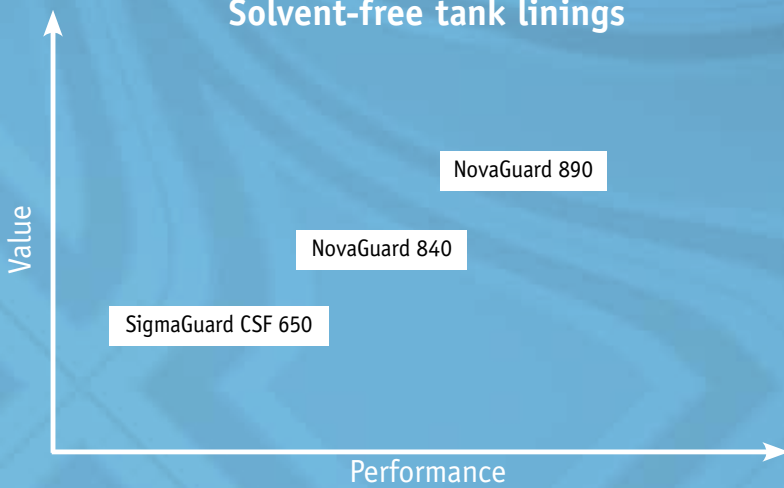
WATER

- SigmaGuard CSF 585
- SigmaGuard CSF 575

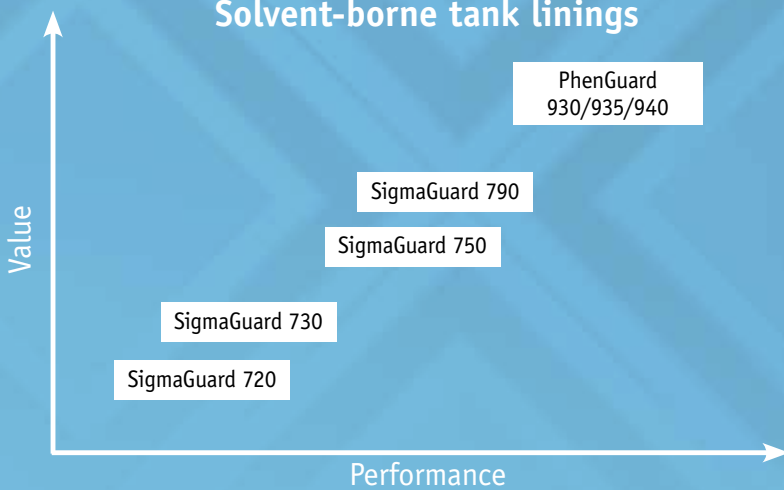
WASTE WATER

- PhenGuard 930/935/940
- SigmaGuard 790

Solvent-free tank linings



Solvent-borne tank linings



Depending on cargo storage, the appropriate tank lining must be selected. For more detailed information on the chemical resistance of our coatings you can use the online Sigma TankSelect tool (<http://tankselect.sigmacoatings.com>).

The SigmaGuard Range

Solvent-free tank linings

NovaGuard 890

Unique tank coating for biodiesel and gasoline blends with ethanol.

NovaGuard 890 is a two-component, solvent-free, amine-cured phenolic epoxy coating and provides superb resistance to biofuels. It's also resistant to biodiesel and gasoline blends with ethanol ranging from 5% ethanol (E5) to 95% ethanol (E95). NovaGuard 890 is ideally suited for the refurbishment of pitted tank bottoms.

- One-coat system directly to steel
- No hot-cure required when gasoline blends with ethanol are stored
- Resistant to crude oil up to 90°C
- Light color, with a smooth and glossy appearance enhancing cleaning and inspection
- Allows reinforcing with chopped glassfiber or glass mat
- Approved according to Air BP standards for the storage of jet fuels

NovaGuard 840

Tank coating for crude oil up to 90°C.

NovaGuard 840 is a two-component, solvent-free, amine-cured phenolic epoxy coating and provides excellent resistance to crude oil, and is highly effective for storing a variety of unleaded gasolines, chemicals and solvents. Its unique properties make NovaGuard 840 an excellent choice for tank maintenance such as glassfiber reinforced systems.

- One-coat system directly to steel
- Can be used as a pit filler in crude oil storage tanks
- Light color, with a smooth and glossy appearance enhancing cleaning and inspection
- Allows reinforcing with chopped glassfiber or glass mat
- Approved according to Air BP standards for the storage of jet fuels

SigmaGuard CSF 650

A one-coat, anti-corrosion solution for crude oil and aliphatic petroleum products.

SigmaGuard CSF 650 is a two-component, solvent-free, amine-cured epoxy coating. Just one coat is required to provide protection for storage tanks holding crude oil, aliphatic petroleum products and a wide variety of chemicals.

- One-coat system directly to steel
- Recognized corrosion control (Lloyds register)
- Meets requirements of Mil-C-4556E for resistance against aircraft fuel and fuel degradation
- Can be used as a pit filler in crude oil storage tanks
- Light color, with a smooth and glossy appearance enhancing cleaning and inspection
- Allows reinforcing with chopped glassfiber or glass mat
- Approved according to Air BP standards for the storage of jet fuels

Solvent-free tank linings

At PPG we specialize in solving problems. Our solvent-free coatings are used to ensure the safe storage of cargoes ranging from drinking water to crude oil, including the storage of (bio)fuels such as biodiesel and gasoline blended with (bio)ethanol. Each coating eliminates the risk of fire and explosion, and provides specific benefits to help you offer the most effective service to your customers. In addition, the pit filling properties of Sigma Coatings' solvent-free range makes them an excellent choice for tank bottom maintenance.

SigmaGuard CSF 585

A solvent-free tank lining for drinking water meeting the latest legislations.

This is a two-component, amine-cured epoxy coating, designed to provide the best water quality as its first priority. It's long-lasting coating delivers excellent coverage and elasticity. SigmaGuard CSF 585 is approved by the Water Quality Centre and meets the criteria of all major quality standards and approval authorities, including BS 6920 Part 1 (UK), KIWA (NL), NSF (USA), and approvals in countries such as Germany and Singapore.

- One-coat system directly to steel
- Benzyl alcohol-free, resulting in minimal formation of bacterial slimes
- Light color for easy inspection
- Light color, with a smooth and glossy appearance enhancing cleaning and inspection
- Certified by major approval authorities

SigmaGuard CSF 575

A solvent-free tank lining ideally suited for drinking water tanks.

This is a two-component, amine-cured epoxy coating, approved for potable water by the National Institute of Public Health and complies to Australian Standard AD 4020(Int)-1994.

- One-coat system directly to steel*
- Recognised corrosion control (Lloyds' Register)
- Light color, with a smooth and glossy appearance enhancing cleaning and inspection
- Reduced risk of explosion and fire hazard
- Extensive track record

* A primer is applied when cathodic protection is required

Solvent-borne tank linings

PhenGuard 930/935/940

The perfect solution where high resistance to organic acids, alcohols, edible oils, fats (regardless of free fatty acid content) and solvents is required.

Each coat in the PhenGuard system is a two-component, high-build, amine-cured phenolic epoxy coating.

- Excellent chemical resistance against, for example, methanol and resistant to hot water
- Low cargo absorption
- FDA approval
- Recognized corrosion control coating (Lloyd's register)
- Light colors and smooth surface enhancing inspection and application
- Extensive track record and well proven

SigmaGuard 790

A solvent-borne tank lining protecting against waste water.

This is a two-component, high-solids, polyamine-cured epoxy coating. SigmaGuard 790 provides a market-leading solution where excellent water and chemical resistance is combined with good abrasion resistance – essential properties where waste water slurries are carried.

- Suitable for waste water slurries of pH 2-10
- Good abrasion resistance particularly to waste water slurries
- Easy to clean
- Excellent track record

Pipelines

In addition to their use as a tank coating, the solvent-free NovaGuard 840, SigmaGuard CSF 575 and SigmaGuard CSF 585 have proven to be excellent as single coat solutions for internal systems on pipelines. Their solvent-free nature, relative flexibility and chemical resistance make these epoxies the preferred choice over other lining systems such as cementitious coatings, urethanes and solvent-based epoxies in water, or coal tar epoxies in hot, sour crude oil.

Maximum cargo flexibility

With over a thousand different cargoes being transported or stored around the world, versatility means profitability. As a result of its ability to handle an exceptionally wide range of cargoes, PhenGuard increases your potential customer base and enables you to maximize your business opportunities.





SigmaGuard 750

An excellent chemical resistance at high and low temperatures.

This is a two-component, moisture-curing, zinc-rich (ethyl) silicate coating. SigmaGuard 750 can be used as a tank coating or as a system primer in various paint systems.

- One-coat system
- Recognized corrosion control (Lloyds' Register)
- Chemical resistance to a wide range of alcohols such as phenols, cresols and methanol without using hot-cure
- Extensive track record



SigmaGuard 730

An excellent resistance against a wide range of chemicals.

This is a two-component, high-solids, polyamine-cured phenolic epoxy coating.

- Two-coat phenolic epoxy coating system
- Cures at low temperatures
- Recognized corrosion control coating (Lloyd's register)
- Light colors and smooth surface enhancing inspection and application
- Short curing times



SigmaGuard 720

A good resistance against a wide range of chemicals.

This is a two-component, high-solids, polyamine-cured epoxy coating.

- Good low-temperature cure
- Recognized corrosion control coating (Lloyd's register)
- Cost effective
- Light colors and smooth surface enhancing inspection and application
- Short curing times

SigmaGuard 260

A holding primer with excellent chemical resistance properties.

This is a two-component, high-build amine adduct cured phenolic epoxy holding primer especially for SigmaGuard CSF 650, NovaGuard 840 and NovaGuard 890.

- Recoating interval up to 2 months
- Good abrasion resistance
- Can be applied, and cures, at temperature down to 5°C
- Fast-curing chemical resistance
- Extensive track record

Value and effectiveness are two key issues when dealing with chemical products. Sigma Coatings' products always meet these needs with coatings designed to deliver the right levels of protection and ease of use. With a keen understanding of commercial time pressures, and the costs of application and maintenance, PPG continues to match business demands with proven product excellence.



The SigmaGuard Range

NovaGuard 890 (*Sigma NovaGuard 890*)

- Two-pack, solvent-free phenolic epoxy

NovaGuard 840 (*Sigma NovaGuard 840*)

- Two-pack, solvent-free phenolic epoxy

SigmaGuard CSF 650

- Two-pack, solvent-free epoxy

SigmaGuard CSF 585

- Two-pack, solvent-free epoxy

SigmaGuard CSF 575

- Two-pack, solvent-free epoxy

PhenGuard 930 (*Sigma PhenGuard 930*)

- Two-pack, high-build, solvent-borne, phenolic epoxy primer

PhenGuard 935 (*Sigma PhenGuard 935*)

- Two-pack, high-build, solvent-borne, phenolic epoxy primer

PhenGuard 940 (*Sigma PhenGuard 940*)

- Two-pack, high-build, solvent-borne, phenolic epoxy

SigmaGuard 790

- Two-pack, high-solid, polyamine-cured epoxy

SigmaGuard 750

- Two-pack, moisture-curing, zinc-rich (ethyl) silicate

SigmaGuard 730

- Two-pack, high-solid phenolic epoxy

SigmaGuard 720

- Two-pack, high-solid epoxy

SigmaGuard 260

- Two-pack, high-build, phenolic epoxy holding primer

PPG Protective & Marine Coatings

PPG Protective & Marine Coatings brings unrivalled levels of innovation, experience and expertise in coatings technology, supported through our expanding global supply and distributors' network in over 80 countries.

We have in-depth knowledge of the industry, our customers' day-to-day challenges and the environmental, health and safety standards in the marketplace. By working in close partnership with customers, our technical service representatives are able to offer an unsurpassed level of market knowledge. This enables us to respond quickly with efficient, economic solutions in all environments and industries.

The result – performance-enhancing coating systems that can be applied more easily, resist the elements more effectively, and deliver maximum performance with minimum downtime.

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