

Coatings for Semiconductor Fab Plants

Proven technologies. End-to-end expertise.





Proven technologies. End-to-end expertise.

In a parts-per-billion world, even the tiniest details are mission-critical. That's why you look for technical partners with standards as exacting as your own.

Meet PPG, a global leader in protecting industrial substrates. We concentrate our nearly century-and-a-half of hard-won experience on the accelerating horizon of today. That's where our comprehensive system of advanced coatings, paints, and specialty materials is backed by matchless customer support, and well-suited for semiconductor fabrication. From structural steel to clean-room walls and floors, from process piping to water-treatment facilities, you can depend on intelligent solutions from the exacting specialists at PPG.

| Exterior Application | | 1st Coating | 2nd Coating |
|----------------------|----------------------------------|-----------------------------------|---------------------|
| A | Structural Steel & Ferrous Metal | PPG AMERLOCK® 600 | PPG PITTHANE® ULTRA |
| | | PPG SIGMAZINC® 68 GP | PPG PSX® 700 |
| | | PPG VERSAFLEX® 468 | |
| | | <i>optional primers available</i> | PPG PITT-THERM® 909 |
| B | Industrial Coatings | PPG DURANAR® | |
| | | PPG CORAFLO® | |

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⚠️ WARNING: Certain products listed here may contain chemicals known to the State of California to cause cancer and/or reproductive harm. For more information go to www.PGSWarnings.ca.gov

Protection in full

PPG is your premier single-source, fab-compatible coatings supplier for your infrastructure surfaces. Our expertise is here to resolve your mission-critical challenges throughout your facility.

Air Handling

Air control and circulation spaces are the lungs of the fab, reaching out to your plant's remotest boundaries. Count on PPG for purity and conformance.

Clean Room

PPG is your source for high-integrity low-outgassing custom solutions that protect tools, workers, and products from stray particulates, chemicals, and gases.

Clean Subfab

An immaculate subfab is the critical portal for all the utilities and services a fab requires. At the subfab level, PPG has you covered.

Segregated Subfab

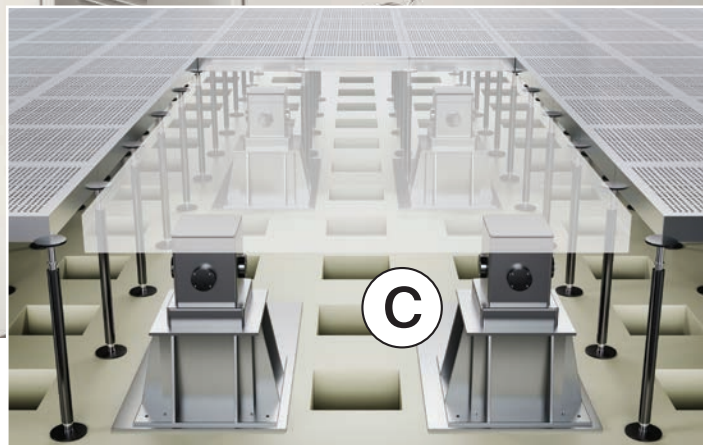
Even outside the strict clean-zone envelope, there's no margin of error. PPG products reliably protect your infrastructure from corrosion while facilitating maintenance.





Clean Rooms

Whether a clean room is stick-built or modular, the standards for design, construction, and maintenance are intensely demanding. Every finish must be smooth and readily cleanable, with minimal, fully sealable joints. That's why fab clean rooms minimize the risks of contamination, temperature, humidity, and electrostatic discharge with solutions from PPG.



💡 INNOVATIONS AT A GLANCE

Focused on minimal outgassing characteristics? Start a conversation with your PPG technical support representative about:

- PPG PSX[®] 700
- PPG POLYSHIELD HIE-PC
- PPG SANISHIELD[™] 5000
- PPG AQUAPON[®] WB EP

| | Interior Application | 1st Coating | 2nd Coating | 3rd Coating |
|---|---|---|---|---------------------------------|
| A | Structural Steel & Ferrous Metal Ceilings | PPG AMERCOAT [®] 68 HS PPG SIGMAZINC [®] 68 GP | PPG PSX [®] 700 | |
| B | Fireproofing | PPG STEELGUARD [®] 951 | PPG PITT-TECH [®] PLUS EP DTM | |
| C | Floors - Electrostatic Protection | PPG 912 LV | Electrostatic Dissipative or Electrostatic Conductive PPG 412 CS Grounding Plane | PPG 412 CS Epoxy Top Coat |
| | Floors - General Purpose | | PPG 610 SL | |
| | Floors - Waffle Slabs | | PPG Polysield HIE-PC PPG NOVAGUARD [®] 5041 | PPG NOVAGUARD [®] 5041 |
| D | Clean Room Walls | PPG SANISHIELD [™] 5000 | | |
| E | Epoxy Coating/Touchup in Outgassing-Critical Spaces | PPG AQUAPON [®] WB EP | PPG AQUAPON [®] WB EP | |



Clean Subfabs

While the clean room captures the fabrication spotlight, backstage in the subfab the indispensable supporting cast of pumps, filters, gas cabinets, and utilities sustains the clean room's delicately balanced routine. No matter how uncommon or exacting your specifications may be, PPG expertise can enhance your subfab's performance.

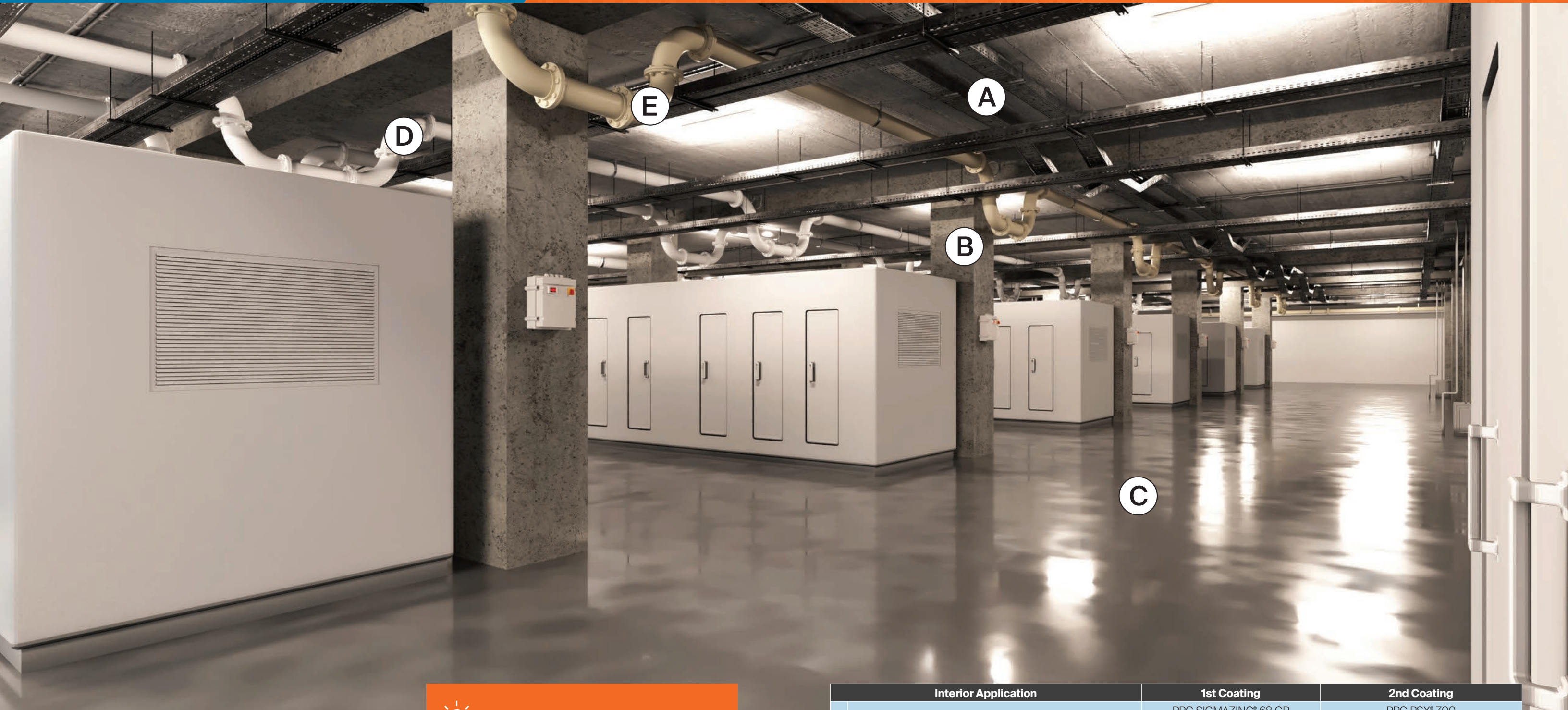


INNOVATIONS AT A GLANCE

Interested in chemical-resistant flooring systems? Start a conversation with your PPG technical support representative about:

- PPG 912LV Primer
- PPG NOVAGUARD® 5041
- PPG NOVAGUARD® 5031
- Vinyl Esters

| Interior Application | 1st Coating | 2nd Coating | 3rd Coating |
|---|----------------------|--|---------------------------|
| A Structural Steel & Ferrous Metal Ceilings | PPG SIGMAZINC® 68 GP | PPG PSX® 700 | |
| B Fireproofing | PPG STEELGUARD® 951 | PPG PITT-TECH® PLUS EP DTM (optional for color) | |
| Floors - Electrostatic Protection | PPG 912 LV | Electrostatic Dissipative or Electrostatic Conductive PPG 412 CS Grounding Plane | PPG 412 CS Epoxy Top Coat |
| C Floors - General Purpose | | PPG 610 SL | |
| Floors - Chemical-resistant | | PPG NOVAGUARD® 5041 | PPG NOVAGUARD® 5041 |
| | | PPG NOVAGUARD® 5031 | PPG NOVAGUARD® 5031 |



Segregated Subfabs

By accommodating the need for tailored environmental conditions, a segregated subfab enhances overall precision and efficiency, ensuring optimal support for each manufacturing step. Bring your substrate and functionality concerns to the world-class coatings specialists of PPG.



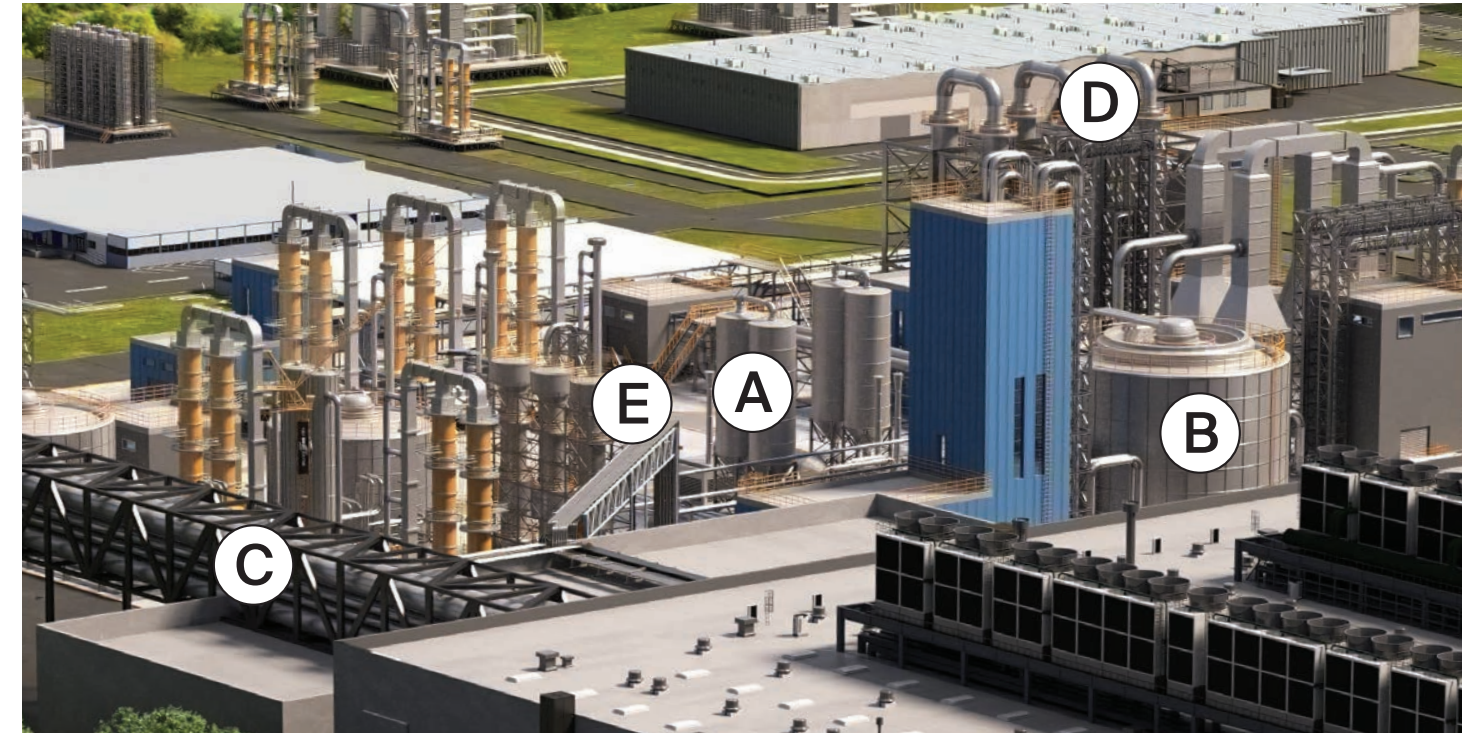
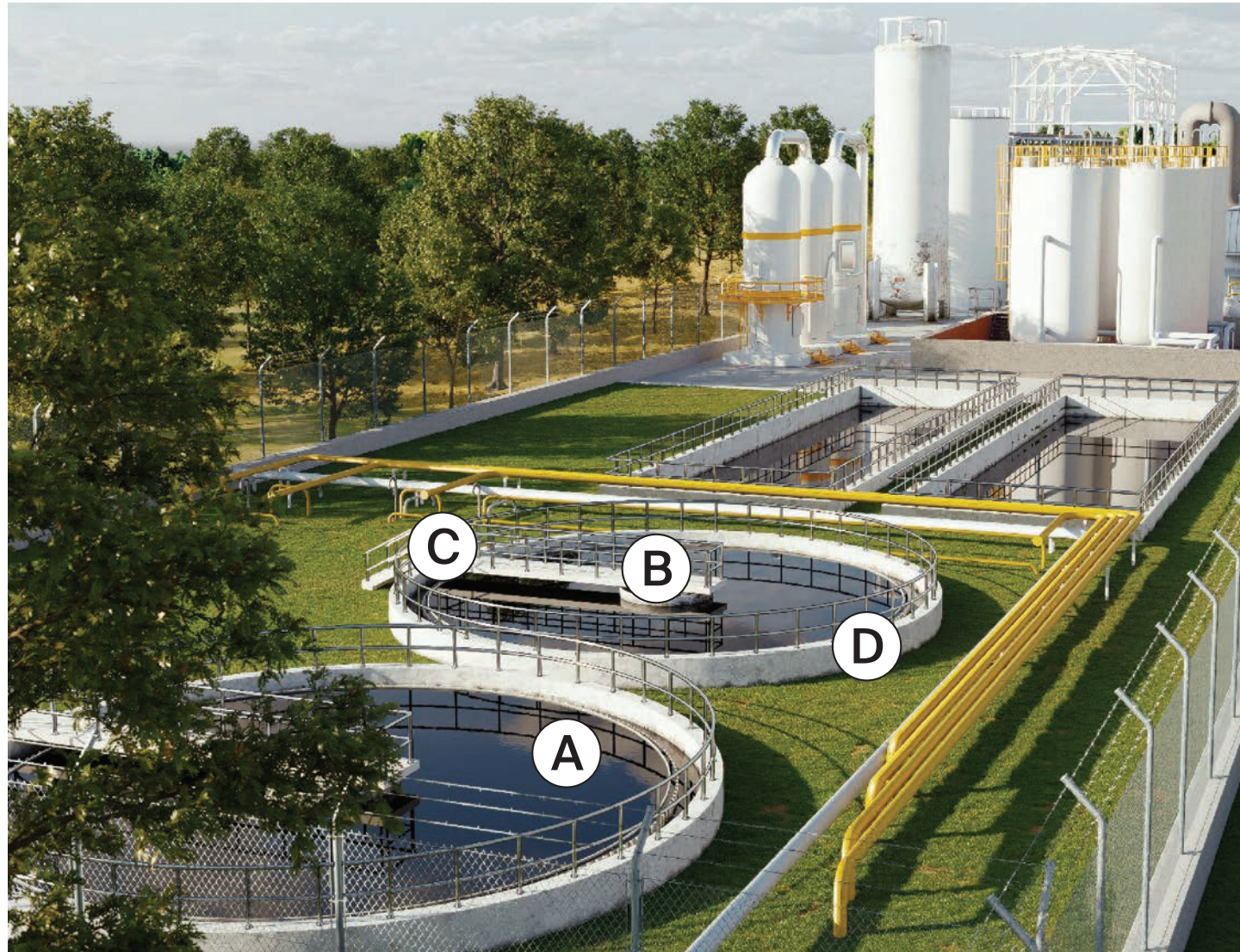
INNOVATIONS AT A GLANCE

Concerned about insulating and protecting high-temperature process piping? Start a conversation with your PPG technical support representative about:

- PPG HI-TEMP™ 1027 HD
- PPG HI-TEMP™ 500/1000
- PPG PITT-THERM® 909
- PPG HI-TEMP™ 808

| Interior Application | 1st Coating | 2nd Coating |
|---|--|--|
| A Structural Steel & Ferrous Metal Ceilings | PPG SIGMAZINC® 68 GP PPG VERSAFLEX® 468 | PPG PSX® 700 |
| B Fireproofing | PPG STEELGUARD® 951 | PPG PITTHANE® ULTRA (optional for color) |
| C Floors - Chemical-resistant | PPG 912 LV PPG NOVAGUARD® 1900 | PPG 610 SL |
| | | PPG NOVAGUARD® 5041 |
| | | PPG NOVAGUARD® 5031 PPG NOVAGUARD® 6850 |
| D Thermal Insulation/Personnel Protection Up to 350°F (176°C) | PPG AMERLOCK® 400 | PPG HI-TEMP™ 808 |
| E Thermal Insulation/Personnel Protection Up to 500°F (260°C) | optional primers available | PPG PITT-THERM® 909 |

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Wastewater Systems

Water efficiency is a critical issue in semiconductor production. With water neutrality as an urgent goal, operators face growing pressures to design and implement treatment facilities that minimize environmental demands. For optimum chemical and corrosion resistance, industry leaders turn to the PPG suite of proven protective agents for concrete and steel components.

| Exterior Application | 1st Coating | 2nd Coating |
|--------------------------------------|---------------------------------------|---|
| A Steel Severe/Immersion | PPG NOVAGUARD® 890 | PPG NOVAGUARD® 890 |
| B Steel Severe/Exterior | PPG AMERCOAT® 68 HS | PPG PSX® 700 |
| C Steel Moderate/Immersion | PPG SIGMASHIELD® 880 | PPG SIGMASHIELD® 880 |
| D Concrete Splash/Containment | PPG RAVEN® 760 PPG NOVAGUARD® 1900 | PPG AQUATAFLEX® Series PPG NOVAGUARD® 6850 |

Tanks, Piping & Secondary Containment

In collaboration with engineers and designers responsible for both workaday and exotic bulk processing and handling challenges, PPG consistently delivers high-performance protective systems. Resilient PPG barriers are recognized as reliable solutions for extending asset life and controlling maintenance costs. Our technologies resist thermal, atmospheric, and immersion exposures effectively in thick- and thin-film applications alike.

| Exterior Application | 1st Coating | 2nd Coating | 3rd Coating |
|--|-----------------------------------|-----------------------|------------------------------------|
| A Tanks (External) | PPG AMERLOCK® 600 | PPG PITTHANE® ULTRA | |
| | PPG SIGMAZINC® 68 GP | PPG PSX® 700 | |
| | <i>optional primers available</i> | PPG PITT-THERM® 909 | <i>optional coatings available</i> |
| B Tanks (Internal)* | PPG NOVAGUARD® 890 | PPG NOVAGUARD® 890 | |
| C Piping (Uninsulated) Up to 350°F (176°C)** Thermal Insulation/Personnel Protection Up to 500°F (260°C) | PPG AMERLOCK® Series | PPG HI-TEMP® 808 | PPG HI-TEMP® 808 |
| | <i>optional primers available</i> | PPG PITT-THERM® 909 | <i>optional coatings available</i> |
| D Piping - High Temperature | PPG HI-TEMP® 1027 HD | PPG HI-TEMP® 500/1000 | |
| | PPG 912 LV | PPG NOVAGUARD® 5041 | PPG NOVAGUARD® 5041 |
| E Secondary Containment* | PPG NOVAGUARD® 1900 | PPG NOVAGUARD® 6850 | PPG NOVAGUARD® 6850 |
| | | PPG NOVAGUARD® 6200 | |
| | | PPG NOVAGUARD® 6800 | |
| | | PPG NOVAGUARD® 6875 | |
| | | PPG NOVAGUARD® 6510 | |
| F Expansion Joint Sealants | PPG SL45 or PPG SL60 | | |
| G Joint and Crack Filler | PPG NOVAGUARD® 3000 FL | | |

* For custom system options contact PPG Rep
** Please consult PPG Rep

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Featured Products

These building blocks are only the beginning. Contact your PPG representative to learn more about how these systems can help meet your goals for compliance, timing, budget, and performance.

Structural Steel & Ferrous Metal

PPG AMERCOAT® 68 HS

Three-component, zinc-rich epoxy with outstanding corrosion resistance and fast dry times for rapid top coating.

PPG AMERLOCK® 600

Two-component, high-build, self-priming multipurpose polyamide-cured epoxy coating compatible with a wide range of substrates.

PPG VERSAFLEX® 468

Direct-to-metal polyaspartic coating designed to provide outstanding corrosion protection, quick return-to-service, and high weatherability.

PPG PITTHANE® ULTRA

Two-component, gloss acrylic aliphatic urethane with outstanding weather resistance and excellent color and gloss retention.

PPG PSX® 700

High-gloss, two-component engineered siloxane coating with excellent color and gloss retention.

PPG SIGMAZINC® 68 GP

High-solids, zinc-rich epoxy primer.

Industrial Coatings

PPG CORAFLO®

Two-component, field-applied, low-VOC (< 25 g/L) fluoropolymer coating with outstanding UV resistance and a lifespan comparable to conventional factory finishes.

PPG DURANAR®

Two-coat 70% fluoropolymer coating system with proven fade resistance, formulated for low maintenance and excellent performance against weathering in all environments.

Fireproofing

PPG PITT-TECH® PLUS EP DTM

One-component, 100% waterborne interior/exterior industrial enamel with excellent adhesion, fast color, and finishes for challenging environments.

PPG PITTHANE® ULTRA

Two-component, gloss acrylic aliphatic urethane with outstanding weather resistance and excellent color and gloss retention.

PPG STEELGUARD® 951

Two-component, 100% solids, epoxy intumescent passive fire protective coating for up to 3-hour protection of structural steelwork from cellulosic fires.

PPG FLOORING™

PPG 412 CS Epoxy Top Coat

Thick, two-component, water-based epoxy electrostatic grounding topcoat. Part of a three-step system for ESD protection.

PPG 412 CS ESD or Conductive

Thick, two-component, water-based epoxy electrostatic grounding plane. Part of a three-step system for ESD protection.

PPG 610 SL

Two-component, 100% solids, high-gloss self-leveling epoxy for concrete surfaces in corrosive environments.

PPG 912 LV

Two-component, highly penetrating epoxy primer/sealer for concrete surfaces.

PPG POLYSHIELD HIE-PC

Unique, low-outgassing, rapid-cure polyurea formulation specially designed for waffle slab applications. Extra-high ductility—up to 600% tensile elongation at break.

PPG PPG NOVAGUARD® 1900

One-component, penetrating moisture-cure concrete sealer for application where high chemical resistance is needed.

PPG PPG NOVAGUARD® 5031

Two-component, 100% solids, chemical-resistant novolac epoxy coating.

PPG NOVAGUARD® 5041

Two-component, 100% solids, chemical-resistant novolac epoxy coating. Resists concentrated acids, caustics, and some solvents.

PPG NOVAGUARD® 6850

Two-component, high-build vinyl ester coating system designed for surfaces subjected to immersion, spills, or fumes. Adheres to both concrete and steel.

Clean Room Walls

PPG SANISHIELD™ 5000

Two-component, elastomeric, aliphatic polyurea topcoat. Solvent-free. Flame spread ASTM E84 Class A.

Epoxy Coating/Touchup

PPG AQUAPON® WB EP

Water-based, fast-drying epoxy system. Ultra-low (26 g/L VOC) outgassing. Minimizes maintenance in high-traffic interiors.

Thermal Insulation & Personnel Protection

PPG AMERLOCK® 400

Two-component, high-solids, self-priming universal epoxy with good adhesion on most existing coatings.

PPG HI-TEMP™ 808

Water-based, 100% adherent, low-permeability seamless acrylic composite insulation. Can be applied to metal at temperatures up to 300°F (149°C).

PPG PITT-THERM® 909

Energy-efficient, high-performance spray-on insulation virtually eliminates corrosion under insulation (CUI) by holding surfaces above dew point, avoiding condensation and resultant corrosion/contamination. One 100 – 200 mil coat provides safe-to-touch (STT) protection up to 500°F (260°C).

Wastewater Systems

PPG AMERCOAT® 68 HS

Three-component, zinc-rich epoxy with outstanding corrosion resistance and fast dry times for rapid top coating.

PPG AQUATAFLEX® Series

100% solids epoxy/polyurethane/polyurea hybrid coating designed for fast curing and high chemical resistance.

PPG NOVAGUARD® 890

Two-component, solvent-free, amine-cured novolac phenolic epoxy coating resistant to a wide range of chemicals and solvents.

PPG PSX® 700

High-gloss, two-component engineered siloxane coating with excellent color and gloss retention.

PPG RAVEN® 760

Three-component, high performance epoxy-modified cement mortar resurfacing material.

PPG SIGMASHIELD® 880

Abrasion-resistant, surface-tolerant, multipurpose epoxy for severe environments.

Tanks, Piping & Secondary Containment

PPG 912 LV

Two-component, highly penetrating epoxy primer/sealer for concrete surfaces.

PPG AMERLOCK® 600

Two-component, high-build, self-priming multipurpose polyamide-cured epoxy coating compatible with a wide range of substrates.

PPG AMERLOCK® Series

Two-component, high-build, self-priming multipurpose polyamide-cured epoxy coating compatible with a wide range of substrates.

PPG HI-TEMP™ 1027 HD

Two-component, ambient-cure multi-polymeric heat-resistant coating system designed to prevent corrosion under insulation (CUI).

PPG HI-TEMP™ 500/1000

One-component, heat-resistant, universal silicone topcoat that can be applied at temperatures from 50 to 500°F (10 to 260°C).

PPG HI-TEMP™ 808

Water-based, 100% adherent, low-permeability seamless acrylic composite insulation material that can be applied to metal at temperatures up to 300°F (149°C).

PPG PPG NOVAGUARD® 1900

One-component, penetrating moisture-cure concrete sealer for application where high chemical resistance is needed.

PPG NOVAGUARD® 3000 FL

Two-component, solvent-free, amine-cured phenolic epoxy coating designed to provide a one-coat solution for steel or concrete substrates.

PPG NOVAGUARD® 6200

Multilayer, high-build laminate flooring with a monolithic surface that resists chemicals, thermal shock, and abrasion.

PPG NOVAGUARD® 6510

Pourable, high-strength, chemical-resistant polymer grout designed for deep-pour projects. Withstands temperatures up to 210°F (99°C).

PPG NOVAGUARD® 6800

Trowel-applied, monolithic lining system formulated to resist concentrated acids, caustics, bleaches, and many solvents. Withstands temperatures up to 210°F (99°C).

PPG NOVAGUARD® 6850

Two-component, high-film-build, novolac vinyl ester coating system for surfaces subject to immersion, spills, or fumes. Excellent adhesion to concrete or steel.

PPG NOVAGUARD® 6875

Trowel-applied, vinyl ester liner for steel or concrete tanks, secondary containment dikes, and other surfaces. Withstands concentrated acids, caustics, bleaches, and many solvents.

PPG NOVAGUARD® 5041

Two-component, 100% solids, chemical-resistant novolac epoxy coating. Resists concentrated acids, caustics, and some solvents.

PPG NOVAGUARD® 890

Two-component, solvent-free, amine-cured novolac phenolic epoxy coating resistant to a wide range of chemicals and solvents.

PPG PITTHANE® ULTRA

Two-component, gloss acrylic aliphatic urethane with outstanding weather resistance and excellent color and gloss retention.

PPG PSX® 700

High-gloss, two-component engineered siloxane coating with excellent color and gloss retention.

PPG SIGMAZINC® 68 GP

High-solids, zinc-rich epoxy primer.

PPG SL45/60

Self-leveling polyurea joint sealants for concrete. Available in a range of cure time and hardness characteristics.

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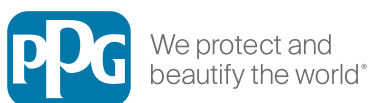


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- We operate and innovate in more than 70 countries.
- We are widely recognized as a leading name in protective and marine coatings.
- Continuous development ensures that we provide optimal solutions for asset owners, contractors, fabricators, and applicators across the globe.

Speak with your PPG rep* or visit www.ppgpmc.com to learn more.

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