Nonstick Coatings for Better Bakeware

Liquid and powder coatings for industrial bakeware

We protect and beautify the world™

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Industrial bakeware coatings from PPG

At PPG, our mission is to protect and beautify. For industrial bakeware, that means creating coatings designed to stand up to the demands of high-volume industrial and artisanal bakers.

Our innovations are suitable for a broad range of products and backed by more than 125 years of innovation and a commitment to quality, performance and sustainability that drives confidence.

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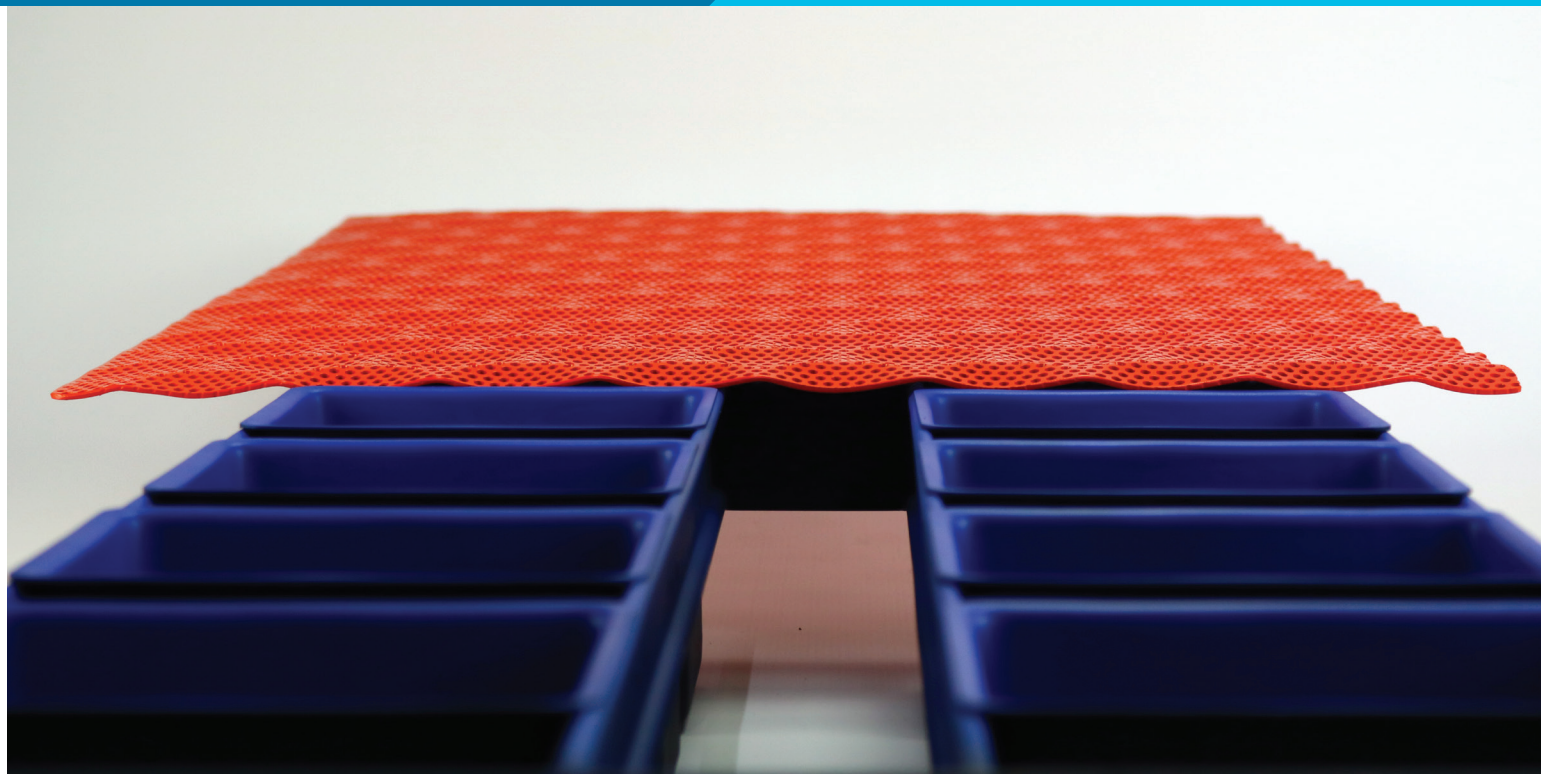


Nonstick coatings for better industrial bakeware

Our comprehensive line of Whitford nonstick coatings are available for both conventional HVLP and electrostatic spray applications. They offer the unique combination of excellent nonstick performance and durability, available for interior or exterior applications.

Coatings are available for a range of substrates and are designed to perform well under high fat, high sugar or protein-containing conditions, all while remaining food-safe compliant.

Suggested markets

Industrial bakeware

Suggested end uses

Industrial bakeware coatings

Food processing machinery

Application Technologies

Spray

A global partner with a local presence

Feel confident choosing a partner in PPG who offers you the combination of global solutions and a local presence. All of our coatings have been formulated to meet the strict requirements you face today, with our teams keeping an eye towards the future.

Unique Benefits

- Coatings available as individual layers or as part of a two- or three-coat system
- Coatings have been tested to provide release for both sweet and savory baking
- Coatings available in a variety of finishes and effects
- Coatings available to suit a range of operating temperatures

Applications for industrial bakeware

Waterborne

System	Coating Type	Product Name	Availability	Product Identifier	Chemistry	Features >	< Potential Benefits to Customer
Waterborne	Primer	XYLAN®	Global	80-087	EP	Low VOC	Saves cost associated with reduced requirement for environmental controls
						Waterborne product	Helps avoid flash rust during application and is suitable for use on refurbished aluminized steel
		Xylan	Global	80-054	EP	Low VOC	Helps avoid flash rust during application
						Waterborne product	Saves cost associated with reduced requirement for environmental controls
		Xylan	EMEA + AP	80-780	EP	NMP non intentionally added	Offers an alternative for customer requirements
						Waterborne product	Helps avoid flash rust during application
		Xylan	EMEA + AP	17-180	EP	NMP non intentionally added	Offers an alternative for customer requirements
						Reinforced coating	Provides enhanced abrasion resistance compared to non-reinforced coatings
						Low VOC	Saves cost associated with reduced requirement for environmental controls
Waterborne	Midcoat	*Xylan*	Global	1700	PFA	Suitable for manual or robotic application as a mid or topcoat	Provides enhanced permeation resistance and longevity in multi-coat system per Atlas Cell test*
		Xylan	Global	1756	FEP	Suitable for manual or robotic application as a mid or topcoat	Provides enhanced permeation resistance and longevity in multi-coat system per Atlas Cell test*
Waterborne	Topcoat	*Xylan*	Global	80-610	PFA	Our longest lasting liquid topcoat	Offers improved permeation resistance at high temperature end uses compared to all other liquid topcoats.
						High film build dispersion technology	Suitable for application in deep tins
		Xylan	Global	80-650	FEP	Our best performance for lower temperature and high sugar bakery applications	Improved permeation resistance compared to other liquid coatings
						High film build dispersion technology	Suitable for application in deep tins
						Low cost	Provides nonstick properties at a price point lower than PFA
Waterborne	Exterior	XYLAC®	EMEA + AP	4660WB	EP	Cost effective	Provides a low-cost alternative to using a primer
						Accepts powder overspray	Enables use of powder topcoats
						NMP non intentionally added	Offers an alternative for customer requirements

*Tests at 100 hours of boiling water

Performance		Substrates			VOCs with exempts		Cure	In service	Application	
Quality	Reinforced	Aluminium	Mild Steel	Aluminized Steel	≤ 420 g/L	≥ 421 g/L	Recommended Cure Profile	Maximum Operating Temperature	Conventional Spray / HVLP	Electricstatic spray
Best		✓	✓	✓	✓		As Top Coat	As Top Coat	✓	
Best		✓	✓	✓	✓		As Top Coat	As Top Coat	✓	
Best		✓	✓	✓		✓	As Top Coat	As Top Coat	✓	
Best	✓	✓	✓	✓	✓		As Top Coat	As Top Coat	✓	
Best		As primer	As primer	As primer	✓		400°C/752°F: 15mins	260°C/500°F	✓	
Better		As primer	As primer	As primer	✓		400°C/752°F:15mins	205°C/401°F	✓	
Best		As primer	As primer	As primer	✓		400°C/752°F: 20-30mins	260°C/500°F	✓	
Better		As primer	As primer	As primer	✓		400°C/752°F: 20-30mins	205°C/401°F	✓	
Best	✓	✓	✓	✓		✓	400°C/752°F: 5mins	260°C/500°F	✓	

Continued on next page

Waterborne (continued)

System	Coating Type	Product Name	Availability	Product Identifier	Chemistry	Features >	< Potential Benefits to Customer
Waterborne	2 coat	*Xylan*	Americas	8254 Primer 8257 Topcoat	PTFE	Standard nonstick system	Provides versatility and performance at a entry-level price point
		Xylan	EMEA + AP	8221 Primer 8224 Topcoat	PTFE	Standard nonstick system	Provides versatility and performance at a entry-level price point
		Xylan XLR	Global	17-080 or 17-180 Primer 17-353 Topcoat	PTFE	Choice of primers with low or medium reinforcement	Offering a broader range of abrasion resistance
						Advanced, premium technology nonstick system	Our longest lasting 2-coat liquid system offering versatility and high release performance
		MATRIX®	Global	80S-088 Primer 80S-089 Topcoat	Sol Gel	Hard surface charatceristics	Provides strong abrasion resistance compared to PTFE coatings
						Low cure temperature	Suitable for temperature sensitive substrates
						Made without PTFE	Provides an alternative to fluoropolymers
Waterborne	3 coat	*Xylan*	Global	17-010 17-110 17-310	PTFE	Improved permeation resistance compared to other PTFE coatings per Atlas Cell test*	Offering enhanced longevity in aggressive conditions compared to 2-coat systems
						Excellent resistance to alkali**	Suitable for pretzel baking

Solventborne

Solventborne	Preprimer	*Xylan*	Global	40-460	EP	Optional primer layer	Provides an enhanced corrosion protection
						Replaces the aluminum layer worn away by grit blasting of used trays	Extends the number of times a tray can be recoated
Solventborne	Primer	*Xylan*	EMEA + AP	80-018	EP	Wide colour range	Suits a broad range of aesthetic preferences
		Xylan	EMEA + AP	80-718	EP	Wide colour range	Suits a broad range of aesthetic preferences
						NMP non intentionally added	Offers an alternative for customer requirements

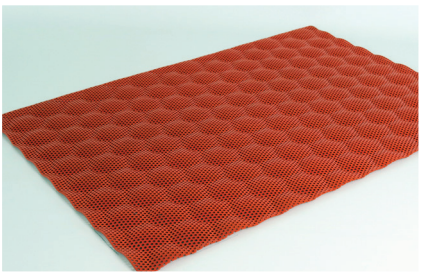
Powder

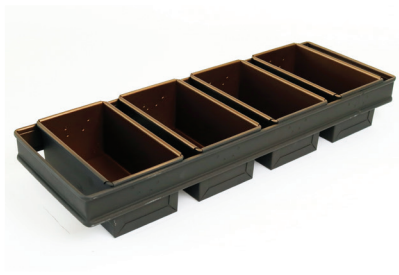
Powder	Topcoat	*Xylan*	Global	80-510	PFA	Our best, longest lasting topcoat for use in high-speed bakeries	Maximizes usage time between the recoating of trays
						Suitable for manual or robotic application	Provides a high level of spray efficiency
						Formulated without VOCs	Saves cost associated with reduced requirement for environmental controls
		Xylan	Global	80-550	FEP	Suitable for manual or robotic application	Provides a high level of spray efficiency
						Formulated without VOCs	Saves cost associated with reduced requirement for environmental controls

*Tests at 100 hours of boiling water

**Coating passes pretzel cycle test where they use a caustic solution

Performance		Substrates			VOCs with exempts		Cure	In Service	Application	
Quality	Reinforced	Aluminium	Mild Steel	Aluminized Steel	≤ 420 g/L	≥ 421 g/L	Recommended Cure Profile	Maximum Operating Temperature	Conventional Spray / HVLP	Electricstatic spray
Good		✓	✓	✓	✓		420°C/790°F: 5mins	260°C/500°F	✓	
Good		✓	✓	✓	✓	✓	420°C/790°F: 5mins	260°C/500°F	✓	
Better	✓	✓	✓	✓	✓		400°C/725°F: 15mins	260°C/500°F	✓	
Good		✓	✓	✓		✓	300°C/572°F: 10mins	288°C/505°F	✓	
Better		✓	✓	✓	✓		400°C/725°F: 15mins	260°C/500°F	✓	
Best		✓	✓	✓		✓	As Top Coat	As Top Coat	✓	
Best		✓	✓	✓		✓	As Top Coat	As Top Coat	✓	
Best		✓	✓	✓		✓	As Top Coat	As Top Coat	✓	
Best		As primer	As primer	As primer	✓		400°C/752°F: 15mins	260°C/500°F	✓	✓
Better		As primer	As primer	As primer	✓		400°C/752°F: 15mins	205°C/401°F	✓	✓



PPG: WE PROTECT AND BEAUTIFY THE WORLD™

A trusted global coatings leader

Operations in 70 countries, with 150+ manufacturing facilities and 70,000+ employees

Renowned color expertise

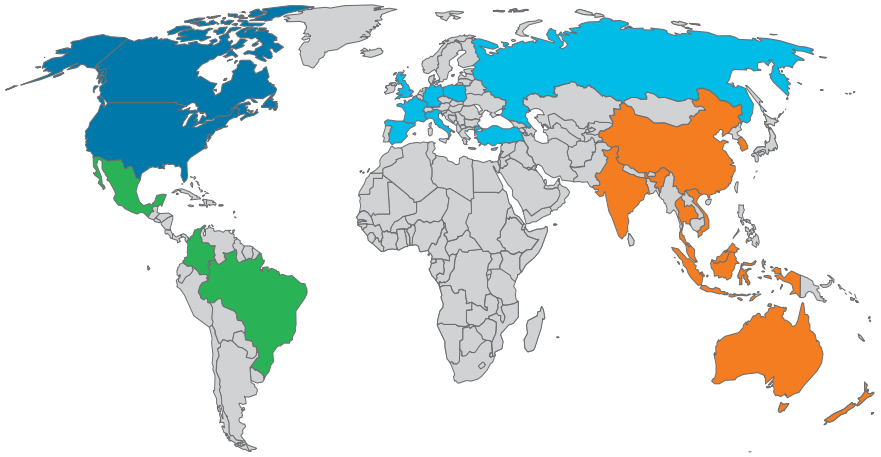
Trend-setting palettes for home, kitchen, auto and industry paired with unrivaled color matching

Commitment to sustainability

Over 30% of annual sales from sustainably advantaged products and processes

Dedication to innovation

3,500+ technical employees and $470+ MM average annual R&D investment



Industrial coatings from PPG

- World-class technical services and training
- Help meeting specific, coatings-related environmental mandates
- Assistance setting up new equipment and identifying areas where your processes may be streamlined
- Troubleshooting production issues
- SECURE LAUNCH EXCELLENCE™ accelerated custom product formulation and color development process

To learn more about PPG coatings, please visit us online at ppgindustrialcoatings.com, or contact one of the international sales offices listed below.

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