How Whitford coatings add value to small electrics

- Bread makers
- Coffee makers
- Deep fat fryers
- Electric skillets/griddles
- Indoor grills
- Panini makers
- Raclettes
- Rice cookers
- Roasters
- Sandwich makers
- Slow cookers
- Toasters/toaster ovens
- Waffle makers
- Whatever your need...

Whitford

Where good ideas come to the surface

Who is Whitford?

Whitford formulates and manufactures high-performance fluoropolymer and ceramic coatings (also known as “nonstick” or “release” coatings). We have coatings for countless applications, including food contact, small electrics, high-temperature use, decorative, industrial, aerospace, automotive, chemical processing, textiles, etc.

Often we formulate special coatings to solve a customer’s specific problem rather than reach for an off-the-shelf product. If we don’t have the right coating to solve your problem, we’ll develop one that will. A wide range of coatings for small electrics is described below.

Eterna®: Rates a 10

The pinnacle in nonstick coatings — outstanding nonstick that lasts — was finally achieved by Whitford when we created Eterna.

The “Dry-Egg” test is a standard measure of food release. Eggs are cooked, one by one, in a nonstick pan with no butter or oil. The test is repeated until the eggs no longer lift off with ease.

Tested were nonstick pans from three major manufacturers. A similar pan coated with new Eterna was tested. The results: Nonstick “A” lasted for 13 fried eggs. Nonstick “B” went to 15. Nonstick “C” went to 33. New Eterna went for 350 fried eggs — at which time the test was stopped.

That’s more than 26 times better than one of today’s most popular nonstick coatings, and more than ten times better than the nearest top-end competitive nonstick system. Eterna works well on aluminum castings when a high-release coating is specified for high-end, gourmet housewares small electrics.

Eclipse®: Rates a 10

Eclipse is a multicoat system engineered to outlast all other reinforced nonstick coatings. The unique primer contains a combination of resins and unusually hard materials. Because it contains no nonstick (virtually all cookware primers do), it can be dedicated entirely to (a) adhesion and (b) reinforcement.

The midcoat also contains special reinforcements, which permit the topcoat to be dedicated entirely to release.

This integrated system provides resistance to wear that exceeds by far all of Whitford's (and other) internally reinforced systems. Specify Eclipse for any high-end or gourmet-type small electrics.

QuanTanium®: Rates an 8

QuanTanium should be specified for all moderately-priced small electrics. It is a multicoat system that contains a unique blend of titanium particles that reinforce as they provide unusual durability. This nonstick system has been formulated to create maximum synergy with the titanium, resulting in outstanding resistance to all kinds of wear with superb release.

Quantum2®: Rates a 7

Quantum2 was developed to outlast conventional nonsticks (even the latest improved versions). Both the primer and the midcoat are reinforced internally with a diverse blend of tough space-age inorganic particles. The fluoropolymers have been altered to blend with the other elements in the coating to achieve maximum durability. No special application equipment is required for any of our internally reinforced nonsticks.

Quantum2 provides a nonstick surface that is smoother, with higher eye-catching gloss than conventional nonsticks. It was designed for surfaces which require nonstick properties and are subject to abrasion and/or high wear.

It is ideal for moderate price points.

Fusion®: Rates a 7

Whitford offers a line of improved waterborne ceramic nonsticks that are totally free of PTFE and PFOA. Because they are ceramic, they can be taken to extreme temperatures (850°F/455°C). Yet, they cure at lower temperatures, using less energy and saving money.

Ceramic coatings are multi-pack systems and involve some fairly complicated chemistry. But we have simplified the application process by reducing the number of packs required. Our two-coat ceramic system needs only two packs for the base- and topcoat.

In spite of all the positives about Fusion, the fact remains that long-term nonstick performance of all ceramic coatings is notas good as conventional nonsticks.

Quantum350®: Rates a 6

As manufacturers of appliances know, one of the most costly problems with aluminum castings is "outgassing", the sudden "pop" of trapped air escaping from inside the aluminum as it is heated during the curing of the nonstick coating, often leaving an ugly "blister" that means the piece is a reject. The higher the cure temperature, the greater the incidence of such blisters.

Quantum350 was formulated specifically for cast aluminum. Virtually all nonstick coatings cure between 400-430°C/ 750-805°F. And most blistering begins to occur at 380°C/715°F. What's remarkable about new Quantum350 is that it cures at 350°C/660°F. In terms of damage from blisters, Quantum350 is far better than conventional two-coats.

This coating offers advantages not previously available to appliance manufacturers. It reduces rejects in cast aluminum dramatically, offers better, longer-lasting release, saves energy, is easier to apply and makes a more eye-appealing product. It does all this in a remarkable, metallic one-coat coating!

Xylan® to Xylan Plus: Rates a 4-6

Xylan, Whitford's largest line of coatings, is specified worldwide by manufacturers, importers, exporters and retail chains for use on products from the most economical to the more expensive cookware, bakeware, electric griddles and grills, to rice cookers, breadmakers, coffee makers, sandwich makers, waffle makers, etc.

Xylan comes in one-, two- and three-coat versions. And today, they are far superior to the coatings of even a few years ago.

Many Xylan coatings are offered in a solvent-borne silicone option (the Series number is followed by an "S"). In this version, the silicone replaces the PTFE, providing similar release characteristics. With the range of products within the Xylan family there are choices from promotional/OPP to moderate on a price/performance basis.

Whatever your coating problem, Whitford probably has the right product to solve it. If not, we will work closely with you to develop the coating that will.

How to contact Whitford

Whitford manufactures and maintains sales offices in many countries of the world. For more information, please contact your Whitford representative or the nearest Whitford office (see our website: whitfordww.com) or sales@whitfordww.com.

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Xylac®: Decorative Enamels

Xylac 4320 decorative enamels bond well to plastics and other temperature-sensitive substrates. They are available in a rainbow of bright, eye-catching metallic and nonmetallic colors with good gloss appeal. This feature allows designers to match coated metal components to plastic parts on the same product.

Xylac 4500 or 4700 is ideal when coating metal housings. They are "better" quality high-temperature decorative enamels. These enamels bond tenaciously to steel, aluminum, plastics and even chrome.

They provide extremely tough abrasion-resistant finishes capable of maintaining their color and other properties after extended periods at elevated temperatures. Formulations are available for coil, roller or spray application techniques.

Coatings for Irons

An often overlooked small appliance is the iron. Irons need a low coefficient of friction to reduce drag and make ironing easier, but they also need superb release to prevent starch and other residue buildup. A third property offered by Whitford coatings is abrasion resistance with the durability to stand up to the rough surfaces of many fabrics. As such, Whitford offers various grades of soleplate coatings.

QuanTanium is the perfect choice for a high-quality steam or dry-iron. A more economical, but durable, coating is Quantum2. It is abrasion-, corrosion-, and chemical-resistant while providing a smooth lubricious nonstick surface.

Xylan 1010, Whitford's very first industrial coating, is known for its outstanding dry-film lubrication, making it ideal for spray pump parts. In the same family of coatings, Xylan 1022 is an easy-to-apply one coat for steam-generator chambers promoting wetting of the chamber to improve steam generation while helping to prevent corrosion.

Whitford recommends Xylac 4320 exterior coating for iron handles and skirts. It is formulated for application to phenolics and comes in virtually any color, including metallics and pearlescents.

Whitford's Quality Cooperative Program

Years ago, as an important step to expand quality control, Whitford established the Quality Cooperative Program (QCP). Its primary purpose is to achieve and maintain the highest quality possible by preventing problems from occurring before any coated products reach point-of-sale.

The QCP establishes certain quality standards that must be met by those who apply Whitford coatings. It also outlines specific test procedures that must be carried out on random samples of all coated products to make sure that these high application standards are maintained. Only members of Whitford's QCP are entitled to use the Whitford trademarks.

To learn how Whitford coatings can add value to your small electrics, give us a call, find details on the web: whitfordww.com.

Rating System Key

Promotional (Price is driving factor):	4-5
Promotional Opening Price Point:	6
Moderate, Opening Price Point:	6-7
Upper Moderate, Moderate:	8-9
High End, Gourmet, Upper Moderate:	10

Whitford Nonstick Coatings for Small Electrics

COATING	CONSUMER	APPLICATION/ POSITIONING	NUMBER OF COATS TEMPERATURE °C (°F) Continuous/Intermittent	FEATURES	RATING	MARKET LEVEL
ETERNA	The world's longest-lasting nonstick.	Virtually all electrics where high release is desired.	Multicoat system. 260°/315°C (500°/600°F)	The unique fluoropolymer composite is what makes Eterna release longer and better.	10	Upper Moderate, Gourmet
ECLIPSE	Engineered to outlast all other reinforced coatings.	Electric skillets, grills, griddles, raclettes, roasters, sandwich and waffle makers.	Internally reinforced 3-coat; spray. 260°/315°C (500°/600°F)	A unique primer reinforced with an unusually high % of materials that are virtually as hard as diamonds.	10	Upper Moderate, Gourmet
QuanTanium	Reinforced with titanium to stand up to almost anything.	Electric skillets, griddles, grills, raclettes, roasters, slow cookers, rice cookers, waffle makers.	Internally reinforced with titanium ceramic 3-coat; spray. 260°/315°C (500°/600°F)	Higher loads of reinforcements, including titanium, for out-standing abrasion resistance and long-lasting performance.	8	Upper Moderate, Moderate
Quantum 2	Reinforced internally for extra durability.	Bread makers, electric skillets, grills, griddles, raclettes, roasters, slow and rice cookers, sandwich and waffle makers.	Internally reinforced 2- or 3-coat; spray. 260°/315°C (500°/600°F)	Multicoat nonstick internally reinforced with a diverse blend of ceramic materials for enhanced abrasion resistance.	7	Moderate, OPP
FUSION	Ceramic nonstick, free of PFOA & PTFE.	High-temperature applications like deep fat fryers, griddles, sandwich makers.	1- and 2-coat; 2-pack system. 350°/400°C (250°/300° for release)*	Good release and durability. High temperature. Variety of colors.	7	Moderate
Quantum 350	Engineered to help avoid problems of casting blisters.	All cast aluminum substrates for small electrics.	One-coat, low cure; spray. 260°/315°C (500°/600°F)	Provides the release and performance of a two-coat.	6	Promotional, OPP
Xylan Plus	Convenience, easy clean and improved durability.	All small electrics where an inexpensive nonstick is desired.	2-coat; spray. 260°/315°C (500°/600°F)	Economical multicoat for good release.	6	Promotional, OPP
Xylan	Convenience and easy clean.	Coffee makers, rice cookers, sandwich makers, deep fat fryers, waffle makers & irons.	1-coat; Curtain or spray. 230°/260°C (445°/500°F)	Good release and economical.	4	Promotional price is driving factor
Xylac	Decorative finish for plastic and metal housings.	Virtually all small electrics where a decorative coating is desired.	1- or 2-coat system; spray. 230°/260°C (445°/500°F)	Easy clean, decorative enamel for temperature-sensitive substrates. Variety of colors.	N/A	All

*Note: OPP=Opening Price Point; *Ask for Fusion Application Guide.*