



PKN
Product Knowledge Network

*Everything you need to know
about nonstick-coated
houseware products — FREE.*

What is a Nonstick Coating?

Introduction

While nonstick coatings serve a simple purpose, there are numerous coating options for every level of the market.

Knowing what they are made of and the different levels of coatings can help simplify what can otherwise be a daunting task.

How do you know which coating is right for your product? Even if you are not the one who selects the coating, how do you know that you are getting what you are paying for?

In the sections that follow, the Product Knowledge Network provides you with the basic information needed to help you address these questions.

What is a nonstick coating made of?

There are five basic elements that make up a coating before it is applied to a product:

1. The **binder (or resin)** adheres to the surface of the pan. It acts as the "glue", providing adhesion and cohesion. It also determines the fundamental properties of the coating.
2. The **pigment** provides the color.
3. The "**nonstick**" component (PTFE or silicone) provides the release.
4. The **reinforcing agents** strengthen the coating and resist wear.
5. The **carrier** (water or solvent), in which the other materials are suspended, and which evaporates when the coating is cured.

How do these components work together?

Let's take a look at a typical three-coat nonstick to see how the components work together in each layer and how the layers work together to form the complete coating:



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1. The first coat or the primer is principally comprised of the binder, since its primary function is to promote adhesion to the substrate (and provide a foundation for the midcoat and topcoat).
2. The midcoat tends to contain more fillers and pigment, which provide excellent hiding power (masking the substrate) and build up the thickness of the coating.
3. The topcoat: This is rich in fluoropolymers, since its primary role is release.

It is generally safe to say that the more coats of nonstick that are applied to a pan, the longer and better the performance will be.

Are there different quality levels?

There are several basic quality levels of nonstick coatings on the market today, ranging from the least expensive (with the lowest performance) to the most expensive (with the highest performance and longest life), all based on the components used and the number of layers:

OPP/Promotional: One-coat nonsticks are used on inexpensive, opening-price-point housewares because they add only a little to the cost of the finished product. They perform adequately, but don't last as long.

Moderate/OPP: Two-coat nonsticks represent most of the lower to moderate housewares. They have good adhesion to the item, because the first, or primer, coat is formulated for adhesion. They also offer better release (the "nonstick" feature), because the second, or topcoat, usually has a higher percentage of PTFE.

Moderate/Upper Moderate: Three-coat nonsticks are generally used on upper-moderate housewares, and, due to the formulating of each coat to provide specific benefits, take the advantages of a two-coat nonstick and extend them.

Upper Moderate/Gourmet: Two- and Three-coat nonsticks that are internally reinforced use microscopic, hard reinforcing elements mixed into the coating to increase the wear and abrasion resistance, and are used on better housewares goods, mostly upper-moderate to gourmet-level products.

Other:

Nonstick coatings that are applied over an externally reinforced system employ a step in which a reinforcing agent (such as stainless steel) is first sprayed onto the surface of the cookware, forming a series of tiny "peaks" and "valleys" into and over which the nonstick coating is applied. The peaks lock the nonstick into place, protecting it from wear and abrasion. For example, if a metal spatula is used on the surface, it will come in contact primarily with the peaks, leaving the nonstick in the valleys virtually untouched. Used mostly on gourmet-level, stainless-steel housewares products.

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Ceramic coatings are relatively new to our industry, introduced in 2009. They have made a place for themselves in the market, due to unique attributes such as the ability to withstand high temperatures, scratch resistance and stain resistance. They can be made in very light colors – even white. Their downside is that they use a silicone fluid as the release agent, which is suspended in the coating, not a part of it. Due to this, the release life of these coatings is short, and with current technology, cannot reach the standards of traditional coatings. Proper application of these coatings is more difficult than traditional coatings, as is proper storage.

Note: Whitford offers an application guide for its ceramic coatings.

Use the following grid to help guide your customer to the nonstick coating level that is right for them.

	Promotional or OPP (Level 1)	Moderate (Level 2)	Upper Moderate (Level 3)	Gourmet (Level 4 and 5)
How often do they cook?	1 or 2 times per week	3 times per week	4 to 5 times per week	In the kitchen daily and on week-ends
Do they enjoy cooking?	Rather be doing something else	As long as it takes 30 minutes or less	Likes cooking, and trying new recipes, but not very adventurous	Loves to cook, love to experiment and is very food savvy
How long do they expect to keep the pan?	Don't really care. When this one is done, will just buy a new one.	A couple of good years of use, but doesn't mind buying a new pan down the road.	Wants the pan to last for several years.	Wants the pan to last as long as it is in their kitchen.

Last but not least, see what they have used before, if anything, and try to guide them to step up to the next level – if they are looking at a level 1 or level 2 coating. With nonstick coatings, as with most products, you get what you pay for – and despite how often they cook or how much they like to cook, if they are looking for a long life out of their pan or have high expectations – spending a little bit more will pay off in the end.

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Summary

So remember:

- Nonstick coatings have been safely used on products sold at retail since 1960.
- There are 5 main components of a nonstick coating: the binder, pigment, "nonstick" component, reinforcing agent and the carrier.
- There are 5 different quality levels of nonstick coatings, which is dependent on the number of layers and the reinforcement used, if any.
- When helping your customer choose a nonstick coated product, it is important to get an idea of how they cook: frequency, enjoyment level, skill level, etc.
- As with most products on the market, if they pay a little bit more they will get a better, longer-lasting product.

This information has been created by the Retail Marketing Team at Whitford. The Product Knowledge Network (PKN) offers you everything you need to know about nonstick-coated housewares products — all for FREE.

For more information, contact us at retail@whitfordww.com, visit us online at productknowledge.com or scan this QR code.



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