



PKKN
Product Knowledge Network

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

Common Myths about Nonstick Coatings

Introduction

A myth is something that is widely believed, but is false.

Myths are dangerous. Wrong information can cause confusion and waste. At the retail level, the wrong information can cost you valuable sales. It can result in misleading your customers, improperly influencing their buying decisions and, even worse, lead to bad decisions about the specifications of a product.

Nonstick coatings are not immune to these types of wrong information. In fact, our industry has more than our share. The information that follows will clear up the most common myths and misconceptions about the formulation and general appearance of nonstick coatings.

MYTH #1: Nonstick coatings wear off easily.

Early nonsticks were almost pure PTFE, which is very soft. As a result, the nonstick coatings applied to the first nonstick products on the market had a very short life span (some even peeled off).

But recent technology has changed that.

Today's nonstick coatings use advanced technology, such as high-tech reinforcing agents, that not only provide superior adhesion to the pan but also outstanding wear and scratch resistance, while still having excellent release properties.

Some nonstick coated products are now guaranteed for the life of the pan.

MYTH #2: If a nonstick surface is scratched, it should be thrown away.

While a cut or gouge in a nonstick-coated product may alter its appearance, it has little impact on its performance. So long as most of the bottom of the pan



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still has nonstick, it will continue to perform up to its standards.

MYTH #3: I will get sick if I accidentally eat a piece of nonstick coating.

Nonstick coatings from reputable manufacturers that comply with standards set by the FDA (and other regulatory bodies in other countries) are in no way harmful.

Nonsticks are made from inert, nontoxic materials that do not harm the body in any way. An official in the FDA's food additives section has stated about such chips of nonstick: "These particles would pass unchanged through your body and pose no health hazard."

Nonsticks are totally safe.

MYTH #4: If a nonstick coating has a rough surface, it won't work right.

A few nonsticks (some of the best and most expensive nonsticks) are reinforced externally. The process involves spraying a layer of hot, molten metal, usually stainless steel, onto the surface of the pan, which forms a series of "peaks" and "valleys" as the metal cools. The nonstick coatings, usually three coats, are then applied onto this cooled metal surface, where the layers sink down into the "valleys" and cover the "peaks".

Once cured, the nonstick coating is now locked into place by the stainless-steel matrix, significantly increasing adhesion to the pan and between each layer.

Now, if a knife or fork is jabbed into the coating, the most damage it can do is scrape a bit off the tiny "peaks", which prevent any damage occurring to the nonstick in the "valleys".

While these "peaks" increase the resistance to scratching and wear, they also can create what appears to be a rough surface. This roughness in no way affects the release (or nonstick) properties of the coating.

MYTH #5: Nonstick coatings used on the interior of a pan can only be made in black.

Actually, a nonstick coating can be made in a range of colors. For interior coatings, the colors that can be offered are limited by two factors.

The first is that they must be FDA-compliant, which means no heavy metals can be used. (Heavy metals, such as lead and cadmium, are what give warmer colors their hues, such as reds, yellows and oranges.)

Second, nonstick coatings are primarily organic and, therefore, subject to some staining, especially from foods such as mustard, catsup, tomatoes (which are rich in color) and dairy products such as milk and

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cheese, which are high in proteins and tend to burn, leaving a discoloration behind. By using a dark-colored nonstick, any staining will be masked and help maintain the appearance of the coating.

Overall, the best colors from a manufacturing and aesthetic point of view for interior nonstick coatings are any shade of black, dark grey and dark pewter. A great effect is a black base coat with a color-tinted top coat, such as a black cherry or dark blue color. Even some copper, bronze and gold/champagne colors can be done successfully.

MYTH #6: There are test methods that can predict how long a nonstick coating will last.

While there are many test procedures that can test for everything from scratch resistance to salt-water corrosion, unfortunately there is no way to interpret these results into number of years of use.

Most procedures attempt to replicate the wear a nonstick would normally receive in a kitchen from stirring with a metal spoon, for example, or rubbing with a normal cleaning pad, or putting it into a restaurant where it will suffer accelerated abuse. But to calculate a specific number of years of life would depend on the person using the pan, how often the pan is used, how roughly it is treated, how it is cleaned, etc.

If trying to calculate the length of a warranty, most nonstick-coating manufacturers can provide information to help you make a decision on this marketing feature.

MYTH #7: It doesn't matter where a nonstick coating comes from — they are all the same.

This myth is more dangerous than you might think. While most manufacturers are reputable (and subject to the regulatory restrictions of their country), "cheating" occasionally takes place.

This can mean using ingredients of lesser quality. It can mean using cheap ingredients that do not meet regulatory guidelines for safety, such as those from the FDA or EU, which could lead to confiscation of cookware/bakeware, etc. It can also mean adulterating the nonstick with cheap solvents or even water, for example, to make the coating go further. This reduces the applicator's cost-per-unit while it raises his profit.

Unfortunately, it also hurts the performance and shortens the service life of the nonstick.

Working with a reputable nonstick-coating manufacturer, one who complies (and can prove he complies) with all applicable regulatory agencies, is as important as which coating is used.

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MYTH #8: The weight of a pan has no effect on the life of the nonstick coating.

Wrong. A pan's weight can and does impact the life of the coating, depending on its ability to distribute heat.

For example, a pan constructed of thick aluminum, copper, or stainless steel with a thick aluminum encapsulated base, distributes heat better, avoiding hot spots. Since nonstick coatings are organic, overheating can damage them. So heavier pans, with good heat conductivity, can contribute to prolonging the life of the nonstick coating.

But a thicker substrate increases the cost of the pan. And better pans generally use better quality nonstick coatings.

So a safe rule of thumb is, the more you pay for cookware with nonstick, which usually means a heavier pan, the better the nonstick coating will be, and the longer it will last.

MYTH #9: Nonstick coatings contain PFOA.

What little PFOA may have been in the ingredients used to make the coating is decomposed and incinerated by the curing (baking) process through which all nonsticks pass, to the point at which it is virtually undetectable in the toughest migration tests.

PFOA is destroyed in one second at 500°F/260°C, and high-quality nonstick coatings are all cured at very high temperatures, usually around 800°F/425°C for 10 minutes. So the conditions are such that the PFOA is destroyed in the curing process.

In every study of nonstick-coated cookware by every regulatory agency worldwide, conducted under normal cooking conditions, the results have been the same: There is no detectable PFOA. Further, the newest versions of many nonsticks are manufactured without the use of PFOA.

It has been, is, and will always be safe to use nonstick cookware, bakeware and small appliances as intended.

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Summary

So remember:

- Thanks to advancements in today's technology, nonstick coatings have excellent resistance to abrasion and wear and maintain their "nonstick" properties longer than coatings from just a few years ago.
- Do not throw away a nonstick pan if the nonstick coating has been scratched or marred.
- You will not get sick if you accidentally eat a piece of nonstick coating.
- If a nonstick coating has a rough surface, it will work the same as any other coated pan and usually means it is externally reinforced.
- While black is the best option, nonstick coatings used on the interior of a pan can be made in other colors.
- There aren't any test methods that can predict how long a nonstick coating will last.
- All nonstick coatings are not the same.
- The weight of a pan can affect the life of the nonstick coating.
- Nonstick cookware, bakeware and all other nonstick-coated housewares do not contain PFOA.

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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