

Competitive Analysis of FDA One Coats

Teflon™ industrial 420G line coatings vs. a competitor's FDA conforming one coat

Data Overview

The Teflon™ 420G line is used primarily in the food processing industry because of its excellent release qualities. Compared to a competitor's FDA conforming one coat, the Teflon™ 420G line has several advantages over the competition, including better release, a lower coefficient of friction, and higher abrasion resistance. Reverse engineering of the coatings demonstrated similar chemical components of both our coating and the competitor's, however, Teflon™ coatings also have a higher fluoropolymer to resin ratio when compared to the competitor's coating. These test results show that Teflon™ 420G coatings outperform the competition and are a long-lasting solution in the food processing industry.



Test	Test Description	Teflon 420G Line	Competitive Coating	Performance Quality Displayed
Contact Angle Test	Measures the angle made between the coating surface and a drop of water. <i>Higher contact angles mean better release.</i>	97.1	93.4	A purple arrow pointing down at a wavy, dark gray surface, labeled "NONSTICK".
Static Coefficient of Friction Test	A coated panel is pulled under an aluminum plate and a machine (designed to run ASTM D1894) records the force. <i>A lower coefficient of friction means less force resisting movement between two surfaces.</i>	.160	.202	Two blue arrows pointing right on a dark gray surface, labeled "LOW FRICTION".
Kinetic Coefficient of Friction Test	A coated panel is pulled under an aluminum plate and a machine (designed to run ASTM D1894) records the force. <i>A lower coefficient of friction means less force resisting movement between two surfaces.</i>	.107	.134	Two blue arrows pointing right on a dark gray surface, labeled "LOW FRICTION".
Taber Abrasion Test	Involves rubbing sandpaper in circles on the coating and then comparing how much coating wore off. <i>A lower score means higher abrasion resistance.</i>	.073	.075	A dark gray oval with red diagonal lines through it, labeled "ABRASION RESISTANT".

*Complete test data is available upon request.

Superior to the Competition

- Stratification:** Teflon™ industrial coatings stratify while curing, which means the fluoropolymer rises to the top of the coating and the resin stays on the bottom close to the substrate. Stratification results in better release qualities from the fluoropolymer on the top and higher durability from the resin on the bottom. The competition's coating does not stratify.
- Chemistry:** Reverse engineering of the coatings found that Teflon™ coatings contain PTFE and PES resin, while the competitive coating contains PTFE, FEP, and PES resin.
- Fluoropolymer Ratio:** Teflon™ coatings have a higher ratio of fluoropolymer to resin than the competition, which means there is more fluoropolymer in the coating.
- Property Comparison:** The 420G line has better release, a lower coefficient of friction, and showed a higher resistance to wear and abrasion than the competitor's one-coat.