

BARRIER TECHNOLOGY

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Making the impossible, possible.

At Inhance Technologies, we continually advance our expertise in transforming commodity and engineering plastics into high performance materials. Our team of dedicated experts focus on customer needs, allowing us to create innovative, solutions for the toughest design and performance problems.

TRANSFORM PLASTICS, BROADEN DESIGN OPTIONS

Conventional plastics tend to be excellent containers for many products, but are not suitable for many formulations that contain solvents, flavors, fragrances, organic active ingredients and fuel mixtures. Contents often permeate through the plastic container walls, leading to loss of product or product efficacy, spoilage and emission problems.

For more than 30 years, Inhance Technologies Fluoro-Seal Process® has created barrier properties for billions of containers made from a variety of plastic materials used in numerous industries.

IMPROVE BARRIER PERFORMANCE

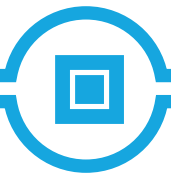
The Fluoro-Seal Process® is suitable for use on a variety of plastic materials. By permanently changing the surface of the plastic, conventional plastics are converted to high performance materials. Some features of the process include:

- Consistency: both the inside and outside of the product, uniformly
- Permanent and durable: enabling use of the article over a long period of time
- Recyclable: as the overall composition of the container remains virtually unchanged

Three-dimensional and complex parts of any shape or size can be treated, either at your facility or at one of ours.



FLUORO-SEAL



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BENEFITS

- Enhance product and packaging integrity
- Greatly reduces, permeation through and absorption of contents into the container wall
- Protects product quality, packaging design, efficacy, and shelf life
- Help products comply with various regulatory requirements, including Food and Drug Administration (FDA) Department of Transportation (DOT), US Environmental Protection Agency (EPA), and California Air Resources Board (CARB) regulations
- Prevents content loss, flavor loss, container paneling, label flagging, discoloration, softening, and odor emissions

APPLICATIONS

- Industrial packaging
- Solvents packaging
- Personal care packaging
- Fuel tanks / containers
- Elastomers
- Medical components
- Household products
- Bulk containers
- Pails
- Particulate sensitive products

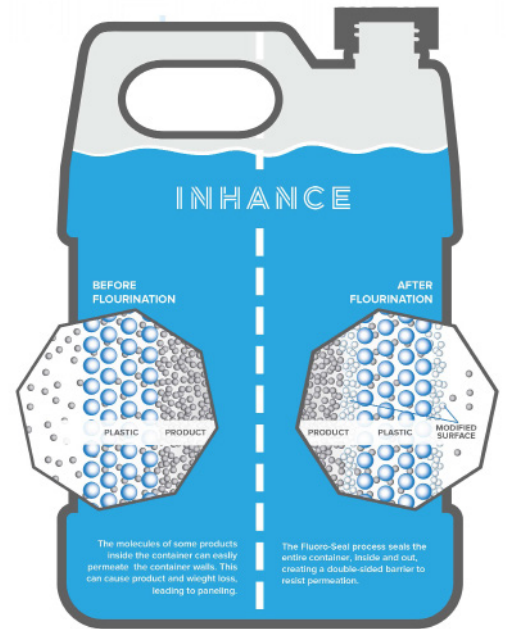
ADDRESSABLE PACKAGING CONTENTS

- Agricultural chemicals
- Fuels / fuel additives
- Cleaners / degreasers
- Solvents
- Acetone
- D-Limonene
- Terpenes
- Essential oils
- Industrial chemicals
- Electronic chemicals

SPECIFICATIONS

Weight loss before and after treatment using our Fluoro-Seal Process® on 125ml non-pigmented blow molded HDPE container with 1mm wall thickness tested at 50°C.

SOLVENT	WEIGHT LOSS (Grahams per liter / per day)	
	UNTREATED	TREATED
1,1,1 - Trichloroethane	10.5	0.03
Xylene	36.0	0.11
Heavy Gasoline	36.0	0.11
Naphtha	21.1	0.10
Toluene	48.1	0.30
Mineral Spirits	9.1	0.10
Carbon Tetrachloride	30.1	0.05
Turpentine	3.9	0.05



The molecules of some products inside the container can easily permeate the container walls. This can cause product and weight loss, leading to paneling.

The Inhance Fluoro-Seal Process® seals the entire container, inside and out creating a double-sided barrier to resist permeation.



Inhance Technologies solutions can be applied in a number of industries to improve product.

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