



PROTĒAN™

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Grease Barrier

PROTĒAN™ Grease Barrier is an aqueous, grease-resistant barrier coating that is a plant-based alternative to petroleum-based plastics, bio-plastics, wax, silicone and fluorocarbons. PROTĒAN™ Grease barrier runs 20% faster on the coating machines when compared to existing fluorine-free alternatives and delivers impressive grease-resistant properties with a lower overall coat weight. The grease barrier properties allow the paper-based packaging to maintain impressive dry strength while the unique formula offers double the range of 3M kit values.

This novel formula is a recyclable, efficient and cost-effective alternative for manufacturers looking to replace their plastic-coatings as an environmentally-responsible decision for future generations. PROTĒAN™ is a versatile and flexible technology that can be easily adjusted for different applications without compromising performance.

### When compared to legacy technologies, PROTĒAN™ Grease Barrier can offer the following benefits:

#### SUSTAINABILITY:

- Made from natural, renewable resources
- Recyclable
- 100% biodegradable and 100% compostable
- Free of fluorocarbons, wax and silicone
- Does not require special conditions for end of life disposal
- Paper is repulpable

#### MANUFACTURING EFFICIENCY:

- Scalable and adaptable using existing mill equipment
- Can be applied using curtain coating, size press and rod coating equipment
- Offers a smooth surface for graphics and printing
- Maintains fiber flexibility for converting
- Can run up to 20% faster and dries quickly

#### VERSATILITY:

- Can be used as an additive or a barrier coating
- Available in a full spectrum of 3M kit values (3-12)
- Suitable for hot or cold products
- Compatible with bleached or unbleached papers
- Can be applied on one or both sides of paper
- Coating can be applied before or after printing
- Suitable as an emulsion for other coating agents
- Available as a full or a spot application
- Will also provide moderate water-resistance
- Is used as a platform technology for new applications

#### SAFETY:

- Meets specifications described in Generally Recognized as Safe (GRAS) notice GRN 514
- FDA approved under 21 CFR 175.186
- Fulfills requirements for ASTM 6400 and 6868; CAN/BNQ 0017-088; ISO 17088 and 16929; and EN 13432
- Non-toxic
- No fluorocarbons

### PROTĒAN™ Grease Barrier can be used for several paper and paperboard applications including, but not limited to:



#### BAKERY WRAPS

Low cost coating to provide superior grease-resistance, but keep contents fresh. Provides flexibility for converting and is designed for high-quality printing.



#### DELI AND SANDWICH WRAPS

Single-use wraps that provide grease-resistant properties to keep deli meats, cheeses and sandwiches fresh. Designed for high-quality printing and durable.



#### FAST FOOD WRAPS AND LINERS

Fluorine-free paper that can be used to provide grease-resistant properties for paper products used by the fast food industry. Surface lends itself for graphics and high-quality printing.



#### FOOD POUCHES

Fluorine-free, easily convertible, grease-resistant food pouches that will keep the contents fresh and are available in a full spectrum of 3M kit values.



#### TAKE OUT FOOD CONTAINERS

Fluorine-free alternative that covers a full spectrum of the 3M kit range. It can be easily converted, offers superior performance and high-quality printing. These containers are repulpable and can easily be recycled.

Contact HS Manufacturing Group® to learn more about PROTĒAN™