



Thetaproof™ PF-7050

Grease and Water Repellent for Food Contact paper

Overview

- Short-Chain Fluorochemical Technology (meets the goal of the US EPA 2010/2015 PFOA Stewardship Program)
- Imparts exceptional oil and grease repellency to paper and paperboard
- Can be applied by the size press, gravure or roll coating methods, or as internal sizing
- Imparts oil and water resistance through standard drying conditions
- Colorless and non-yellowing, does not affect texture, color, lubricity, air permeability or strength of the treated paper
- Compatible with starch and size components
- Imparts a sizing effect with water resistance
- Water-based, meeting all VOC Regulations with low VOC (less than 100g/L, as delivered) content
- FDA Compliant: All Foods; A-H and J, including microwave susceptor
- BfR Compliant: XXXVI

Applications

- Paper and paperboard (including whiteboard)
- Classified for oven-heated and microwaveable packaging such as popcorn bags (including those with microwave susceptor) and fast food wrappers
- Recycled and bleached paperboard
- Light weight and business papers
- Molded pulp products, such as paper plates

Technical Information

Thetaproof PF-7050 is a partially fluorinated oil and grease resistant finishing treatment designed for paper and paperboard, and approved for Food Contact use with oven-heated and microwaveable packaging approvals.

Thetaproof PF-7050 has been specifically designed for ease of use, for application by either size press or coating external sizing, or wet end internal sizing methods.

Thetaproof PF-7050 is compatible with a wide range of anionic, cationic and amphoteric sizing ingredients and paper modifying resins.

Environmentally responsible, Thetaproof PF-7050 is nonflammable and meets all current VOC regulations.

Formulary

Thetaproof PF-7050 can be used by either size press or coating external sizing, or wet-end internal sizing methods.

Typical use levels are 1-5% as received for size press application and 0.2-1.0% solids based on dry pulp weight for wet-end processing.

Typical Properties

PROPERTY	VALUE
Appearance	Off-white to light pink liquid
Odor	Mild
Ionic character	Weakly anionic
Activity, %	11-13
Water solubility	Dispersible
pH (as is)	7.5±1.5
Density@25°C	1.05±0.08
Flash point	None (aqueous)
Storage	Perishable if Frozen
Shelf life	12 months

Packaging and Handling

Thetaproof PF-7050 is available in:
55 gallon plastic drums (Net Wt. 441 lbs)
5 gallon pails (Net Wt. 40 lbs)

Refer to the Safety Data Sheet (SDS) for information on the safe use, handling, and disposal of this product.

DOT Classification: Non-Regulated

Whether you're looking for a replacement product or an ingredient for a specific attribute, give us a call. We can provide assistance based upon your particular formulation requirements and composition; please feel free to contact us.

Please refer to back page for important information

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Regulatory

FDA Compliance:

Thetaproof PF-7050 is compliant with the US Food Contact Substances regulation, listed on the FDA's Inventory of Effective Food Contact Substance Notifications as oil and grease resistant treatment for paper and paperboard.

Thetaproof PF-7050 may be used at a level not to exceed 0.4 percent by active weight of dry paper and paperboard intended for use in contact with all food types under Condition of Use A through H and J (including microwave susceptor applications) as described in Tables 1 and 2.

Bundesinstitut für Risikobewertung (BfR) Recommendation XXXVI:

Thetaproof PF-7050 is BfR recommended for single and multi-layered commodities (articles, materials) made of paper or paperboard at a level of 0.4% active material based on dry fibres weight which is intended to come into contact with or affect foodstuffs.

This BfR Recommendation is also valid for paper or paperboard which are intended to be used at temperatures up to 90°C (holding and reheating of food).

Use and performance summary

External sizing method:

Typical use levels are 1-5% as received for size press application, and 0.5-1.5 g/m² for coating application, mixed with appropriate wetting and sizing agents. Standard drying conditions of 100-130°C are recommended.

Size press application	Wt. % as received			
Thetaproof PF-7050	2.0	3.0	2.0	3.0
Cationic starch (10%)	20.0	20.0		
Polyvinyl alcohol (10%)			10.0	10.0
Total	100	100	100	100
Wet pick-up, %	47	47	53	57
TAPPI kit	6	10	9	10
Cobb 60 (g/m ²)	24	15	15	15

Internal sizing method (wet end):

Typical use levels are 0.2-1.0 solids % based on dry pulp weight, added to the pulp slurry, appropriately diluted with water and mixed with desired starches and resins. Standard drying conditions of 100-130°C are recommended.

Wet-end application	Solids % based on dry pulp weight			
Thetaproof PF-7050	0.3	0.4	0.3	0.4
Cationic starch			0.7	0.7
Polyaminoamide-epichlorohydrin (PAE) resin			0.3	0.3
TAPPI kit	6	7	6.5	8
Cobb 60 (g/m ²)	35	32	33	30

General recommendations:

Determine compatibility of Thetaproof PF-7050 with co-treatment ingredients such as sizing and strengthening agents. Properly dilute ingredients with thorough mixing and apply directly. Apply sufficient heat with adequate ventilation for thorough dry/cure.

This information relates only to the specific material referred to herein and not to its use in combination with any other material or in any process, unless explicitly stated herein. Such information is, to the best of our knowledge and belief, accurate and reliable as of the date compiled; however, no warranty, guarantee or other representation is made as to its accuracy, reliability, or completeness, or regarding any liabilities arising from others' intellectual property rights. ID# 20160528