



ADVANCED POLYMER, INC.

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API-NSF101

API-NSF101 is a waterborne non-fluorinated, non-silicone textile finish designed to impart a soft and superior water repellent treatment on polyester, nylon, cotton or cotton/polyester fibers. API-NSF101 delivers exceptional durability through weathering and many home launderings. It is best suited for broad application in the finishing mill, when cured at low to medium temperature.

CHARACTERISTICS

- Superior water repellency on a wide range of textile fibers.
- Waterborne non-fluorinated, non-silicone based repellent.
- Outstanding durability through weathering and home launderings.
- Provides a soft hand and improved tear and abrasion resistance.
- One component water repellent system.

APPLICATION

Fabric should be free of any surfactants, oils or any cleaning product residue prior to application. Typically, API-NSF101 can be diluted to 16–24 wt% (4–6% active content) in water, pad applied and heat cured and dried at 325 °F for 3–4 minutes. Application conditions can be adjusted to fit your system and performance criteria.

PERFORMANCE DATA

API-NSF101 was diluted at 5% actives (20wt%), applied via padding at 40psi and heat cured and dried at 325 °F for 3–4 minutes:

Wet Pick-up, Dry & Cure Temperatures, and Fabric Weight:			
FABRIC	WET PICK-UP	DRY & CURE	FABRIC WEIGHT
100% Cotton Twill	67%	325 °F x 3 minutes	258 grams/m ²
100% Nylon 66	68%	325 °F x 3 minutes	124 grams/m ²
50/50 Cotton Polyester	77%	325 °F x 3 minutes	145 grams/m ²

See results on next page

TYPICAL PROPERTIES

Appearance:	Milky White
Solid Content :	25%
Ionic Nature:	Cationic
Specific Gravity (@ 25°C):	1.09

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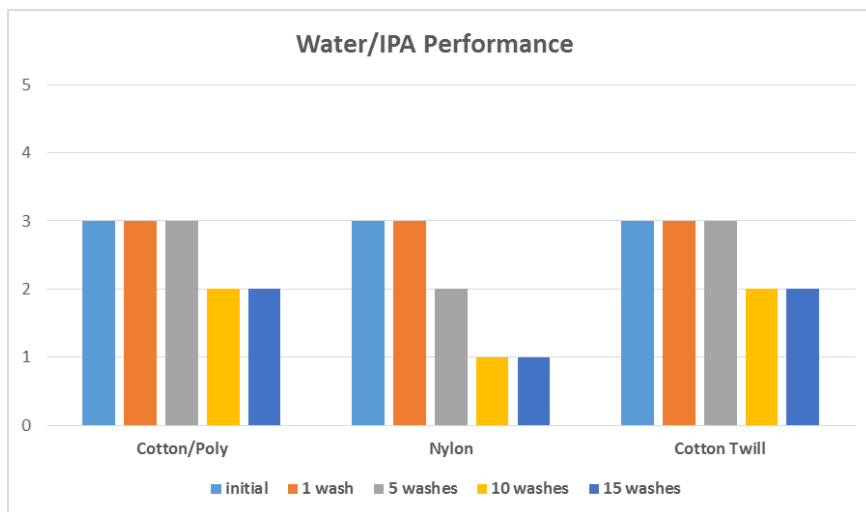
PERFORMANCE DATA

API-NSF101 was diluted with water to 20wt% (5% active content) padded onto different types of fabric. To get an accurate indication of performance, both natural and synthetic fabrics were used. After application the fabric swatches were analyzed for Water/IPA and Water Spray Repellency up to 15 home laundering cycles.

Procedure for Determining Water Repellency:

The water repellency rating numbers are based on the following:

WATER RATING NUMBER	IPA CONCENTRATION	WATER CONCENTRATION
1	2%	98%
2	5%	95%
3	10%	90%
4	20%	80%
5	30%	70%
6	40%	60%
7	50%	50%
8	60%	40%
9	70%	30%
10	80%	20%
11	90%	10%
12	100%	0%



Beginning with the highest numbered test liquid, carefully place one drop in several locations on the fabric. Repeat with lower numbered liquids until the lowest number is reached that does not wet out the surface in 10 seconds.

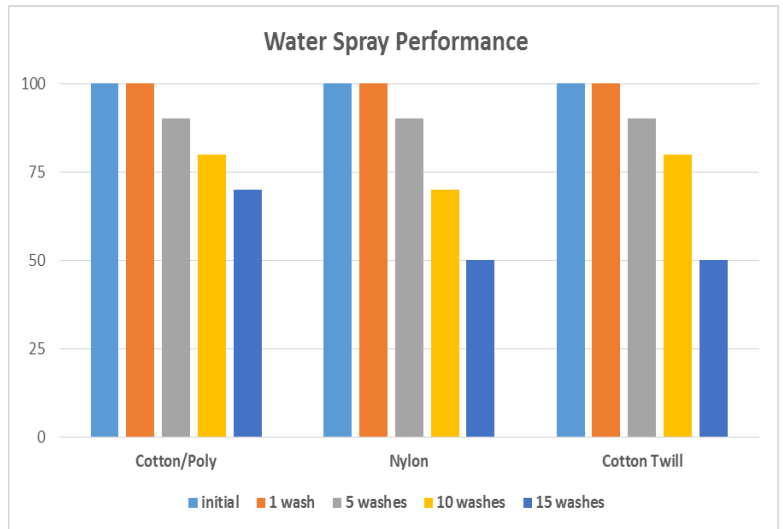
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Procedure for Determining Water Spray Performance (AATCC 22):

The Water Spray Repellency rating numbers are based on the following:

Rating	Performance Description
0	Complete wetting of the entire face of the specimen
50	Complete wetting of the specimen face beyond the spray points
70	Partial wetting of the specimen face beyond the spray points
80	Wetting of specimen face at spray points
90	Slight random sticking or wetting of the specimen face
100	No sticking or wetting of the specimen face



PACKAGING

API-NSF101 is available in 8 oz. samples and 441-lb. drums.

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I want to know more!

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- AdvaPel® 712

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