



Flexipel™ HR-N205

Non-fluorinated Water Repellent

Overview

- Water repellent and soil resist product for mill application on textiles and nonwovens
- Non-fluorinated product
- Substrates include cotton, polyester, and polyester/cotton blends
- For 100% cotton fabric:
Water Repellency rating of 4 and Spray Rating of 80 with 2.5% actives owf and heat cure of 160°C for 5 minutes
- For 100% polyester fabric:
Water Repellency of 3.5 and Spray Rating of 75 with 2.5% actives owf and heat cure of 160°C for 5 minutes
- For polyester/cotton (65/35 blend):
Water Repellency of 3.5 and Spray Rating of 75 with 2.5% actives owf and heat cure of 160°C for 5 minutes

Applications

- Treatment of textile substrates such as cotton, polyester, and polyester/cotton blends
- Treatment of nonwoven substrates

Technical Information

Flexipel HR-N205 is a nonionic product which provides water repellency for textile and nonwoven substrates. The product is designed for mill application with a heat cure.

Formulary

Flexipel HR-N205 is diluted with water for use, with a recommended starting point of 2.5% actives on weight of fiber (owf).

Fabric application by dip/nip or low-pressure spray are recommended, followed by heat cure.

Do Not Aerosolize.

Typical Properties

PROPERTY	VALUE
Appearance	Opaque emulsion
Color	White to tan
pH	4.0 to 7.0
Water solubility	Dispersible
Actives, %	25 to 30
Ionic Nature	Nonionic
Density@25°C	1.00 to 1.02 g/ml
Boiling point	est. 100°C
Flash point	Non-combustible
Storage	Perishable if frozen.
Shelf life	12 months

Packaging and Handling

Flexipel HR-N205 is available in:
275 gallon totes (2205 lb. net wt.)
55 gallon plastic drums (441 lb. net wt.)
5 gallon plastic pails (40 lb. net wt.)

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 are 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.

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Preparation of Test Fabric/Treatment

A treat rate of 2.5% actives on weight of fiber (owf) was used to prepare the test fabric. The Flexipel HR-N205 was diluted in deionized water and applied uniformly to each test substrate by dip and nip application, followed by a heat cure at 160°C for 5 minutes.

Water/Alcohol Repellency Drop Test (The DuPont Test Method)

To evaluate the relative water repellency of a treated fabric, the Water/Alcohol Repellency Drop Test is commonly used. In this test, a series of wetting solutions with increasing wetting power are applied to a treated test fabric with treated surfaces repelling the strongest wetting solution achieving the highest repellency rating. Repellency was measured by applying 3 drops of test liquid and observing wetting of the treated surfaces. Test liquids ranged from weakly wetting 2% isopropanol in water (1 rating) to strongly wetting 50% isopropanol in water (6 rating). The higher the concentration of isopropanol (higher number rating) of the drop not wetting the surface, the more repellent the surface. If the drops were repelled for longer than 10 seconds, the surface was judged to be repellent to the test liquid. The control fabrics had a water repellency rating of 0.

Water Repellency: Spray Test (AATCC Test Method 22)

Water sprayed against a taut surface of a fabric test specimen under controlled conditions produces a wetting pattern whose size depends on the repellency of the fabric. Ratings range from 0 for complete wetting of the entire face of the specimen to 100 for no sticking or wetting of the specimen. The control fabrics had a water repellency/spray test rating of 0.

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