Thetapel™ AM-5050PE

Short-Chain After-Market ambient temperature cure DWR finish

Overview

- Short-Chain Fluorochemical Technology (meets the goal of the US EPA 2010/2015 PFOA Stewardship Program)
- After-Market soil and stain surface protection performance for Polyester Apparel, Upholstery and Nonwoven fabrics
- Exceptional ambient cure Oil and Water Repellency on polyester
- Readily dilutes in water with excellent temperature and freeze/thaw stability
- Imparts exceptional soil and stain protection to surfaces with little or no change in appearance
- Water based with no VOC content
- Treated surfaces are easier to clean, and improves newness retention
- Designed for ambient cure performance, AM-5050PE is also perfect for coater application to polyester fabrics
- Compatible with a range of co-applied materials for enhanced surface protection
- Performance summary-

  Water/Alcohol repellency:
  6 rating
  Oil repellency:
  6 rating

Applications

- Polyester substrates including After-Market Apparel, Upholstery, and Home Furnishings Soil and Stain Protectors
- Ideal for polyester outdoor fabric protection such as awnings, patio furnishings and boat and RV covers
- Mill application for polyester fabrics

Technical Information

Thetapel AM-5050PE is a partially fluorinated product designed for aftermarket, ambient cure, soft surface soil and stain protection applications. Thetapel AM-5050PE has been specifically designed to impart soil and stain protection to polyester substrates through optimal water and oil repellency when applied to apparel and upholstery fabrics.

Thetapel AM-5050PE is a pre-formulated concentrate that readily dilutes in water, exhibiting exceptional storage stability properties. Environmentally responsible, products formulated with Thetapel AM-5050PE meet all current VOC regulations.

Formulary

Simply dilute Thetapel AM-5050PE in water. Recommended dilution rates vary from 1 part AM-5050PE in 16 parts water (6%) to 1 part AM-5050PE in 9 parts water (10%) depending on application rates, application method, porosity of the substrate, desired performance, and cost parameters.

The addition of a preservative is recommended for packaged dilutions. Preservatives should be selected and evaluated by the formulator to determine use concentration, effectiveness, and formulation stability. Contact your preservative supplier for guidance and recommendations.

Typical Properties

PROPERTY	VALUE
Appearance	Opaque liquid, pale yellow to brown
Odor	Mild
Ionic character	Weakly cationic
Water solubility	Disperses
pH (as is)	3.7 to 6.7
Density@25°C	1.07±0.04 g/ml
Boiling Point Flash Point	Approx. 100°C > 100 °C
Active content	Approx. 20%
Storage	Protect from freezing, Mix before use
Shelf life	12 months

Packaging and Handling

Thetapel AM-5050PE is available in:
275 gallon totes (Net Wt. 2205 lbs)
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

Thetapel™ AM-5050PE
Formulation Guidance

Dilution rates
Recommended dilution rates vary from 1 part Thetapel AM-5050PE in 16 parts water (6%) to 1 part AM-5050PE in 9 parts water (10%) depending on application rates, application method, porosity of the substrate, desired performance, and cost parameters.

Polyester Apparel and Upholstery
For exceptional soil and stain resistance, dilute Thetapel AM-5050PE to between 6 and 10% in water, and apply uniformly at a rate of 1 to 2 fluid ounces per square yard. Excess liquid applied to a substrate should be wiped up if it has not penetrated after 15-20 minutes to avoid hazing from over-application of the product.

Note: Ambient temperature cure time for maximum protection is approximately 24 hours, although most formulations should dry to the touch within 2 hours. Application rate, concentration of Thetapel AM-5050PE applied, and temperature/humidity can impact dry/cure times.

Thetapel AM-5050PE is compatible with a wide range of complementary co-applied products for enhanced surface protection such as stain resists (see Flexisperse PM-20C), antistats (see Flexistat WR-152, Flexipel AM-998), and ultraviolet light absorbers (see Flexisorb AQ-51C), while maintaining excellent water and oil repellency.

In spray applications, use a coarse spray device, such as a trigger sprayer or pressurized dispenser, that does not produce respirable fine particles. DO NOT AEROSOLIZE OR ATOMIZE.
For further Safety Information, please refer to the Material Safety Data Sheet (MSDS) for information on the safe use, handling, and disposal of this product.

Performance Data
Water/Alcohol and Oil Repellency

Preparation of Test fabric surface treatment
6.0% Thetapel AM-5050PE was diluted in deionized water, spray applied to a 100% polyester substrate uniformly at a rate of 1.5 fluid ounces per sq. yd., and dried overnight (24 hours) at ambient temperature.

Water/Alcohol Repellency Drop Test (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 water repellency of the Thetapel AM-5050PE treated fabrics achieved a 6 repellency rating for 100% polyester fabric, indicating a strong resistance to soiling and staining liquids. The control fabric (untreated polyester) had a water repellency rating of 0.

Oil Repellency Drop Test (AATCC Test Method 118-2002)
To evaluate the relative oil repellency of a treated fabric, the Oil Repellency Drop Test is commonly used. In this test, a series of solvent solutions with increasing solvent power are applied to a treated test fabric, with treated surfaces repelling the strongest solvent 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 mineral oil (1 rating) to strongly wetting decane (6 rating). The higher the 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 oil repellency of the Thetapel AM-5050PE treated fabrics achieved a 6 repellency rating on 100% polyester fabric, indicating a strong resistance to soiling and staining liquids. The control fabric (untreated polyester) had an oil repellency rating of 0.