



innovative chemical technologies, inc.

FLEXIPEL AM-900

TECHNICAL DATA SHEET

- ◆ **Aqueous, Partially Fluorinated Polymer Used To Produce Ambient Cure Soft Surface Protectors**
- ◆ **Provides Excellent Oil, Water And Alcohol Repellency**
- ◆ **Provides Dry Soiling Resistance**
- ◆ **Provides Durable Soil And Stain Release**
- ◆ **Readily Dilutes In Water: Meets All VOC Regulations**
- ◆ **Specifically Designed For Use On Carpet And Upholstery**
- ◆ **Excellent Choice For Aftermarket Application**
- ◆ **Freeze Thaw Stable**

APPLICATIONS

- ◆ **Carpet Protectors**
- ◆ **Upholstery Protectors**
- ◆ **Automotive Carpet And Upholstery Protectors**
- ◆ **Textile Mill Applications**

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TECHNICAL INFORMATION

Flexipel AM-900 is a partially fluorinated polymer designed for aftermarket, ambient cure protector applications. It can also be used in textile mill applications, and because it ambient cures, it is especially useful when limited drying capacity is available. Flexipel AM-900 provides exceptional oil, alcohol, and water repellency, as well as excellent dry soil resistance and soil release. It is used to protect carpet and upholstery from oil and water based stains and soiling. This anionic fluorochemical dispersion can be co-applied with other materials, such as stain resists, antistats, and ultraviolet light absorbers (see Flexisorb AQ-50), and stands out compared to other fluorochemical soil resist products because it is compatible with a broad range of materials and delivers excellent water repellency in their presence. Flexipel AM-900 allows you to use one product on carpet and upholstery with superior results.

Flexipel AM-900 is a concentrated product that readily dilutes in water with exceptional storage stability even after diluted. If acids are added to Flexipel AM-900, predilution in water prior to addition is required. The pH of any finished formulations containing Flexipel AM-900 should be kept at or above 7.5 in order to maintain desired stability. Products formulated with Flexipel AM-900 meet all current VOC regulations. Flexipel AM-900 is freeze/thaw stable as delivered and retains freeze/thaw stability in dilutions up to 50% Flexipel AM-900 in water.

FORMULARY

Recommended dilution rates vary from 4% (24 to 1) to 10% (9 to 1) Flexipel AM-900 depending on the application, application rate, desired performance and cost parameters. Addition of a preservative is recommended for dilutions. Starting level for the listed preservatives is 0.05%: Nipacide BIT 20, Dantoguard Plus (Granular), or Proxel GXL, VeriGuard 19S. Some typical dilutions are as follows:

Carpet: Flexipel AM-900 can be diluted to 5% and applied at a rate of 1 gallon per 200 square feet for carpet as recommended by other fluorochemical suppliers, but more typically, it is diluted to between 6 and 10% and applied at a rate of 1 gallon per 400-600 square feet.

Apparel and Upholstery: Dilute Flexipel AM-900 to between 4 and 10% and apply approximately 1.5 fluid ounces/square yard.

Carpet Mill Application: Apply 0.5% to 1.0% Flexipel AM-900 on face weight of carpet fiber by spray or foam application.

Note: Ambient temperature cure time for maximum protection is approximately 24 hours, although most formulations should dry to the touch within 1-2 hours. Application rates, concentration of Flexipel AM-900 used, and temperature/humidity can impact dry/cure times. Because Flexipel AM-900 will cure under ambient conditions, it is perfect for application on the coater and for application to polyolefins and other fabrics that are sensitive to heat.

PERFORMANCE DATA

1 part of Flexipel AM-900 was diluted with 9 parts of water and sprayed on a variety of fabrics ranging broadly in construction, end-use, and composition. Application rate was approximately 2.88 fluid ounces/square yard of fabric which was sufficient to evenly wet the fabrics. The fabrics were allowed to dry and cure overnight (24 hours).

Water/Alcohol Repellency Drop Test (DuPont Test Method)

Repellency was measured by applying 3 drops of test liquid and observing wetting of the surfaces. If the drops were repelled for longer than 10 seconds the surface was judged to be repellent to that test liquid. Test liquids ranged from 2% Isopropyl Alcohol (1 rating) to 50% Isopropyl Alcohol (6 rating). The higher the concentration of Isopropyl Alcohol (higher number rating), the more repellent the surface.

- ◆ The water repellency of the fabrics tested was excellent and ranged from a rating of 2 to 4 with the average of all fabrics equal to 3 out of 6.

Oil Repellency Drop Test (AATCC Test Method 118-1989)

Repellency was measured by applying 3 drops of test liquid and observing wetting of the surfaces. If the drops were repelled for longer than 30 seconds the surface was judged to be repellent to that test liquid. Test liquids ranged from mineral oil (1 rating) to Decane (6 rating). The higher the number test liquid the more repellent the surface. Decane (6 rating) is more difficult to repel than Dodecane (5 rating), which is more difficult than Tetradecane (4 rating) and so forth.

- ◆ The oil repellency of the fabrics tested was excellent and ranged from a rating of 3 to 6 with the average of all fabrics equal to 4.9 out of 6.

Stain Release (AATCC 171 Hot Water Extraction Test Method – Carpet Yarn)

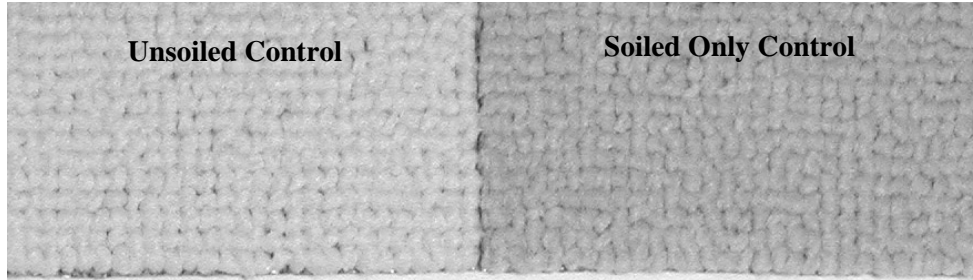
Stain release is rated from 1 to 5 on an AATCC gray scale with 1 equal to heavy severe stain and 5 equal to no visible stain.

- ◆ 5 stains were evaluated: coffee, mustard, red beverage, salad dressing, and dirty motor oil. All stains were rated equal to 4 or 5 after extraction with the average of all stains equal to 4.8.

Dry Soil Resistance with Soil Release Demonstration (ASTM 6540 Method)

- ◆ Equal to or better than competitive carpet protectors after soiling, vacuum, and extraction. (see demonstration photographs on page 4)

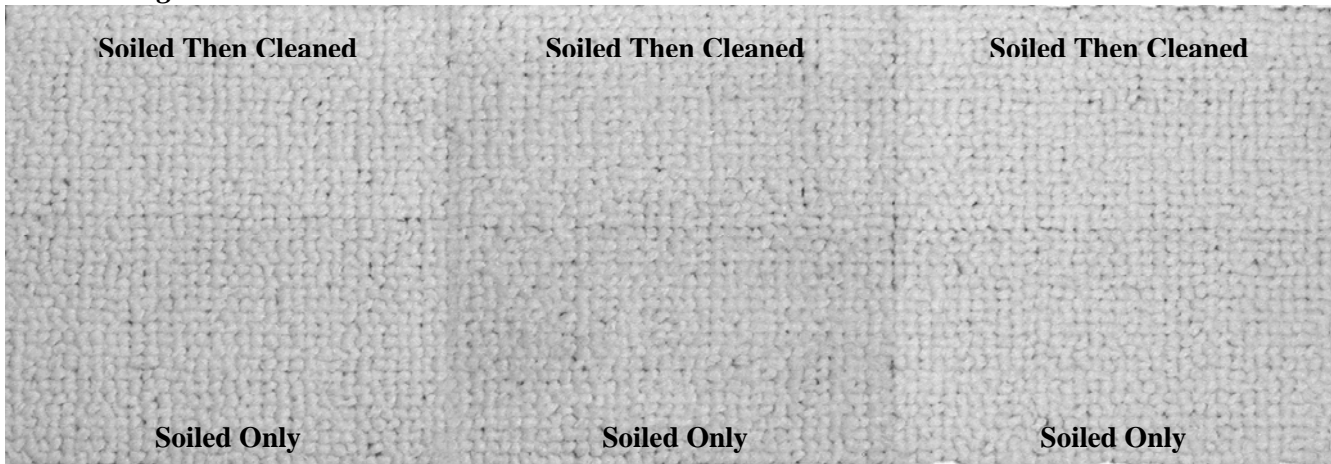
DEMONSTRATION



Leading Soil Protector

Leading Repellent

Flexipel AM-900



Above is a demonstration of the soiling protection and soil release of Flexipel AM-900 when compared to the leading competitive ambient cure products. The samples were initially treated per label instructions with each product then soiled uniformly using ASTM method 6540. Following the soil application, each sample was divided in two and one half was extraction cleaned using a commercially available cleaning formula. The resulting cleaned sample was then compared to the soiled sample to demonstrate the soil release properties of each respective product.

TYPICAL PROPERTIES

Appearance	Pale Yellow Emulsion
Density @ 25C	1.04 +/- 0.02 g/ml (8.7 lbs/gal)
pH (as is)	7.5 to 9.5
Water Solubility	Dispersible
Boiling Point	Approx. 100C

PACKAGING/HANDLING

Flexipel AM-900 is available in totes (Net Wt. 2200 lbs),
55 gallon drums (Net Wt. 440 lbs) and 5 gallon pails (Net Wt. 40 lbs).
DOT Classification is Non Regulated