



Flexiclean™ CC-560G

Overview

- Dispersant Polymer Used in Encapsulating Carpet and Upholstery Cleaning Formulations
- Provides Powerful Cleaning Properties without Tacky Residue
- Eliminates Rapid Resoiling through Brittle Dry Down and Encapsulation
- Formulations are Readily Certifiable Via Carpet and Rug Institute (CRI) Seal of Approval Program, Green Seal GS-37 and Other Independent Certification Programs
- Enhances Dry Soil Pick-Up During Vacuuming
- Imparts Anti-Soiling Properties to Cleaned Surfaces
- Allows Reduction of the Detergent Load in the Formulation
- Ultra Low VOC: Formulate Effectively With Less Than 1% Total VOC
- Enables Use of One Super Concentrate to Create an Entire Next Generation Carpet Cleaning Program

Applications

- Commercial and Retail Carpet and Upholstery Cleaners: Extraction, Prespray, Traffic Lane, Spotter, Low Moisture, Bonnet
- Automotive Carpet and Upholstery Cleaners

Technical Information

Many carpet cleaning products used in the commercial and retail marketplace are highly alkaline detergent/surfactant systems that leave behind tacky soil-attracting residues. The chemical nature of high alkaline tacky products can sometimes damage the stain resistance built into the carpet by the carpet manufacturer. While some of these products clean effectively, their residues will actually damage the carpet and cause rapid resoiling. This rapid resoiling can result in complaints from owners who have their carpets professionally cleaned, only to find that the carpet gets dirty and grey soon after cleaning. Another common complaint related to carpet and upholstery spot cleaners is that upon removing a stain, the stain quickly returns, bigger than the original spot. This effect is caused by tacky residual detergent attracting oily particulate soil. It is not that the stain came back: a new stain is appearing because of the nature of the spot cleaner's residue. These common industry problems have led to the Carpet and Rug Institute's recent Seal of Approval Program which verifies and certifies a product's cleaning and resoiling character (www.carpet-rug.org). Using Flexiclean CC-560G in upholstery and carpet cleaning formulations eliminates these problems. When used as prescribed, Flexiclean CC-560G formulations can be readily certified via the CRI Seal of Approval Program, providing a next generation product with excellent cleaning and minimal resoiling.

Additional Enhancements with ICT Chemistry

Flexiwet™ NF is a unique low to no foam, defoaming fluorinated surfactant. The addition of Flexiwet NF provides:

- Increased Wetting and Penetration (Especially on olefin and polyester fibers)
- Improved Cleaning and Soil /Stain Removal
- Enhanced Anti-Soiling Properties
- NOT for Use in Certified GREEN Products

Flexisperse™ 220 is a unique acid polymer used as a builder and dispersant. The addition of Flexisperse 220 provides:

- Neutralization of Ammonia Odor inherent in Flexiclean CC-560G
- Enhanced Soil Resistance
- Reduced Wick-Back and Browning
- Reduced Scale and Hard Water Deposits in Equipment

Flexistop™ AF-333 is an efficient SILICONE FREE Anti-Foaming agent. The addition of Flexistop AF-333 provides:

- Rapid Foam Collapse, Increasing Efficiency of Extraction Equipment and Defoaming without Negative Resoiling

FORMULARY

The super concentrate formula below can be used to quickly and economically produce a full line of carpet and upholstery cleaning products.

<u>GREEN Carpet And Upholstery Cleaner Super Concentrate</u>	
Water	57.0 - 60.0%
Flexisperse 220	5.0%
Flexiclean CC-560G	35.0%
Flexistop AF-333	0.0 - 3.0%
pH	8.0 - 10.0
<i>Add in order listed</i>	
<i>Blend after each addition</i>	
<i>Add fragrance and preservative as desired</i>	

<u>Spotter / Traffic Lane / Bonnet Cleaner</u>	
Super Concentrate	8 - 16%
Water	Q.S.
<i>Use Dilution: RTU</i>	
<i>Add fragrance and preservative as desired</i>	

<u>Extraction Cleaner</u>	
Super Concentrate	10 - 25%
Water	Q.S.
<i>Use Dilution: 2 - 4 fluid ounces per gallon of water in extraction machine</i>	
<i>Add fragrance and preservative as desired</i>	

Note: The pH of the final product should be between 8.0 -9.5 in order to optimize cleaning and prevent possible damage to carpets.

	Low Foam Extraction Cleaners								
Water	68.0%	74.0%	84.0%	87.2%	89.4%	91.8%	94.1%	95.7%	
Flexisperse 220	4.0%	3.0%	2.0%	1.0%	1.0%	1.0%	1.0%	0.8%	
Flexiclean CC-560G	25.0%	20.0%	12.0%	10.0%	8.0%	6.0%	4.0%	3.0%	
Flexiwet NF	1.0%	1.0%	1.0%	1.0%	0.9%	0.7%	0.5%	0.3%	
Flexistop AF-333	2.0%	2.0%	1.0%	0.8%	0.7%	0.5%	0.4%	0.2%	

Soiling Performance Data

Products

Sample 1: Flexiclean CC-560G Based Extraction Cleaner, 4oz/gal (label use instruction)

Sample 2: Commercial Extraction Cleaner 4oz/gal (label use instruction)

Test

Evaluation of Resoiling Characteristics of Carpet Cleaning Products

Procedure

ASTM D 6540-00 *Accelerated Soiling of Pile Yarn Floor Covering* (excluding AATCC Gray Scale)

Scope

This is a standardized laboratory procedure for determining the effects of cleaning equipment, chemistry and technologies on the resoiling properties of a specified floor covering. A control test carpet is prepared by applying 3 grams of ready to use cleaning solution diluted according to label instructions in a 2.5 inch circle template. The control test carpet is allowed to thoroughly ambient dry and is then soiled per ASTM D6540-2000. Additional control carpet that has no cleaning solution applied is soiled per ASTM D6540-2000. The difference (ΔEc) between the unsoiled carpet and the soiled control; and the difference (ΔEt) between the unsoiled carpet and the soiled test carpet (cleaned) are measured using a HunterLab Miniscan XE Spectrophotometer. The difference between these results is calculated as

$$\Delta \Delta E = \Delta Ec - \Delta Et$$

This test practice is applicable to all liquid carpet cleaning chemicals.

Test material description: 26 oz, cut pile, nylon 6,6, tenth gauge, without stain/soil treatment, dye free

Results

Sample	ΔEc	ΔEt	$\Delta \Delta E^*$
Sample 1	15.80	11.43	4.37
Sample 2	14.13	17.62	-3.49

*Negative numbers indicate treated carpet attracts more soil than the untreated standard



Sample 1
Flexiclean CC-560G Based
Extraction Cleaner

Sample 2
Commercially Available
Extraction Cleaner

Cleaning Performance Data

Products

Sample 1: Flexiclean CC-560G Based Extraction Cleaner, 4oz/gal (label use instruction)

Sample 2: Commercially Extraction Cleaner, 4oz/gal (label use instruction)

Test

Cleaning Efficacy Evaluation of Carpet Cleaning Products

Procedure

CRI TM 111 *Evaluation Procedures for CRI Carpet Cleaning Certification of In-Tank and Pre-Spray Cleaning Products* (excluding Lab and AATCC Gray Scale)

Scope

This is a standardized laboratory procedure for determining the cleaning efficacy of carpet cleaning chemicals which are designed to be applied as a pre-spray or by using extraction equipment. Uniformly soiled control test carpet is prepared using ASTM D6540-2000. Additional unsoiled control carpet is prepared. The soiled control test carpet is cleaned using specific extraction equipment and procedures. The difference (ΔE_s) between the soiled control test carpet and the unsoiled control carpet; and the difference (ΔE_f) between the cleaned control test carpet and the unsoiled control carpet is measured using a HunterLab Miniscan XE Spectrophotometer to determine the degree to which the cleaning chemical was able to restore the control carpet to its original appearance. The difference between these results is calculated as

$$\Delta \Delta E = \Delta E_s - \Delta E_f$$

This test practice is applicable to all liquid carpet cleaning chemicals

Equipment

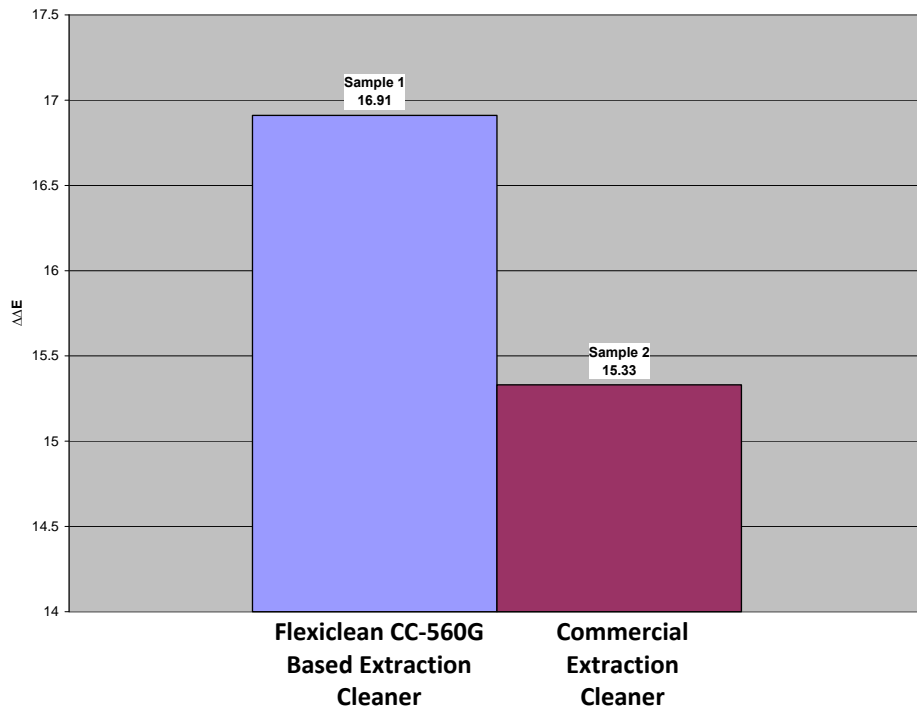
Specifications of control extractor/wand: 1.0 gallon solution tank; 1.5 gallon recovery tank; 60 psi solution pump; 3 stage 1.8 hp vacuum motor; 136 inch sealed water lift; single jet (110-03) 4" wand.

Test material description: 26 oz, cut pile, nylon 6,6, tenth gauge, without stain/soil treatment, dye free

Results

Sample	ΔE_s	ΔE_f	$\Delta \Delta E^*$	Number Wet Passes	Number Dry Passes
Sample 1	20.55	3.64	16.91	3	3
Sample 2	18.32	2.99	15.33	3	3

*Larger, more positive numbers indicate cleaner carpet



Typical Properties

Appearance	Clear, pale yellow liquid
Density	1.07 +/- 0.02 g/mL (8.9 lbs/gal)
pH (as is)	9.5 to 10.5
Water Solubility	Soluble
Boiling Point	Approx. 100°C

Packaging and Handling

Flexiclean CC-560G is available in 275 gallon totes (Net Wt. 2300 lbs), 55 gallon drums (Net Wt. 460 lbs), and 5 gallon pails (Net Wt. 40 lbs).

DOT Classification is Non Regulated.

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.