



# Flexisorb™ AQ-51C

Cationic UV Absorber for Textiles and Hard Surfaces

## Overview

- Designed to impart effective UV protection to fabrics and hard surfaces
- Emulsifiable ultraviolet light absorber for aqueous systems
- Micro-emulsifies in cold water
- Based on well proven and accepted Benzotriazole UV absorber technology
- Provides uniform dispersion and coverage due to small particle size microemulsion
- Highly efficient
- Disperses with slow addition and good agitation

## Applications

- Carpeting
- Carpet shampoos and Extraction cleaners
- Upholstery
- Apparel
- Fabrics of all types
- Paints & Coatings
- Tire dressings
- Interior automotive surfaces
- Leather

## Technical Information

Flexisorb AQ-51C is a highly effective cationic UV absorber designed for use in water based systems. Flexisorb AQ-51C forms clear microemulsions upon dilution in water. The very small and uniform particle size (<50nm) provides more uniform surface coverage than typical UV absorbers that form unstable, large particle size dispersions resulting in non-uniform surface coverage.

Flexisorb AQ-51C is based on well proven and accepted benzotriazole chemistry. Unlike water soluble UV absorbers, Flexisorb AQ-51C forms an aqueous microemulsion of water insoluble particles that evenly disperse to form a more durable UV protective coating than is possible with water soluble alternatives. This product provides better shelf stability than paste type UV absorbers. Flexisorb AQ-51C is a liquid which dilutes in cold or room temperature water with good agitation and slow addition.

## Typical Properties

PROPERTY	VALUE
Appearance	Clear, yellow liquid
Odor	Mild
Ionic character	Cationic
Water solubility	Microemulsifiable
Active content, %	55.0±5.0
pH (1% aq.)	6.5-8.0
Density@25°C	1.03±0.02
Boiling Point	Approx. 100°C
Flash point	Does not ignite below 100°C
Storage	Stable to freezing
Shelf life	12 months

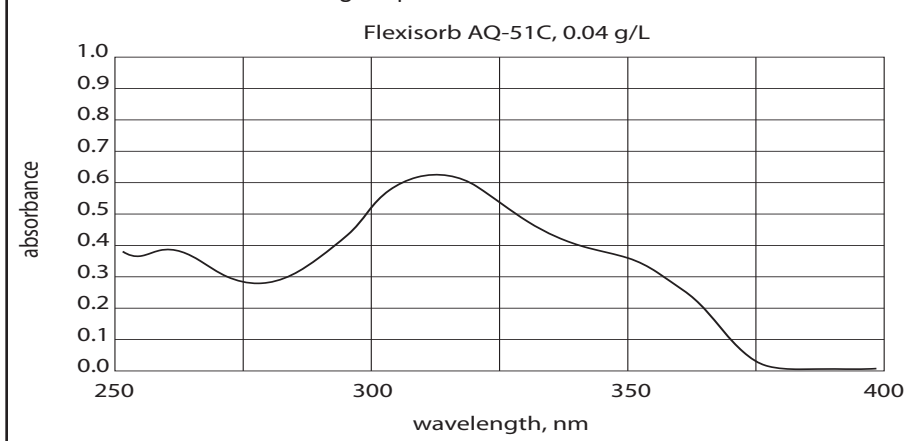
## Packaging and Handling

Flexisorb AQ-51C is available in:  
275 gallon totes (Net Wt. 2200 lbs)  
55 gallon plastic drums (Net Wt. 440 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

The following is an absorbance spectrum of a 0.04g/L microemulsion of AQ-51C demonstrating UV protection at low concentration



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**

## Flexisorb AQ-51C

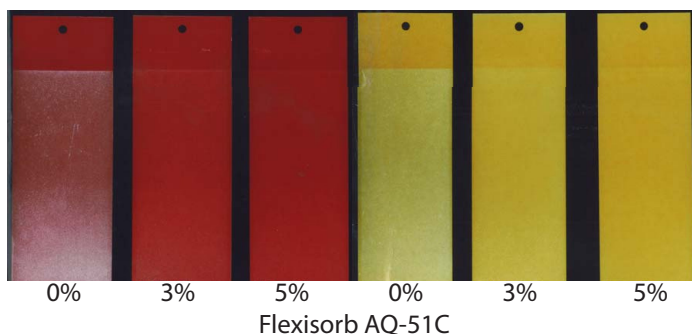
### Water dispersible UV absorber

Flexisorb AQ-51C is a self-emulsifiable Ultraviolet Light Absorber, designed for aqueous systems to impart UV protection to fabrics and hard surfaces. Combining proven benzotriazole UV absorbing chemistry with advanced microemulsion technology, Flexisorb AQ-51C is highly efficient.

The key benefit with Flexisorb AQ-51C is that the highly efficient benzotriazole-based UV absorber active ingredient is not water soluble, but instead is micro-emulsifiable, for a more durable UV protective treatment than obtainable with water soluble UV absorbers. The very small particle size (<50nm) of the microemulsion formed with Flexisorb AQ-51C provides a more uniform coverage for superior performance compared to competitive alternatives. Flexisorb AQ-51C forms a clear, stable microemulsion in cold water with good agitation, for advantages over paste type UV absorbers which require high shear agitation.

Recommended use levels vary from 0.25 to 10.0% depending on the application, application rate, and desired performance. Flexisorb AQ-51C can be added to most water based cationic, amphoteric, or nonionic coatings to provide protection against UV degradation. For anionic compatible systems, use Flexisorb AQ-50.

The panel below illustrates the effectiveness of Flexisorb AQ-51C in protecting coatings against color change. In this example, Flexisorb AQ-51C concentrations are at 0%, 3% and 5% for each color. Note that after a 3 year Florida sun exposure, the 5% AQ-51C treated coating showed almost no degradation, while the untreated (0% panel) exhibited severe color change.



## Formulation suggestions

Oil & Water Repellent for Apparel and Upholstery	
Ingredient	Wt. %
Water	to 100
Flexisorb AQ-51C	0.25-1.0
Thetapel AM-5010	10.0
Leather Cleaner and Conditioner	
Ingredient	Wt. %
Water	to 100
Flexisorb AQ-51C	1.0-4.0
Flexicon LC-65	25.0-35.0
Vinyl/Tire Dressing	
Ingredient	Wt. %
Water	to 100
Flexisorb AQ-51C	1.0-4.0
Flexiclean SS-100	0.5
Latex Paint	
Ingredient	Wt. %
Latex paint	96-98
Flexisorb AQ-51C	2-4
<p><b>Formulation notes:</b></p> <ul style="list-style-type: none"> <li>• <b>Slowly add Flexisorb AQ-51C to water first, while mixing with good agitation</b></li> <li>• High shear mixing is not necessary, but good agitation needs to be used for the water and during slow addition of Flexisorb AQ-51C</li> <li>• <b>Add Flexisorb AQ-51C to cold or room temperature water. Do not add to warm or hot water.</b></li> <li>• Review product information for Thetapel AM-5010, Flexicon LC-65, and Flexiclean SS-100 for product use details.</li> </ul>	

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