



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
- WERCS ID number: 1647211
- WERCS validation number: 30120ict

Applications

- Carpeting
- Carpet shampoos and Extraction cleaners
- Upholstery and 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

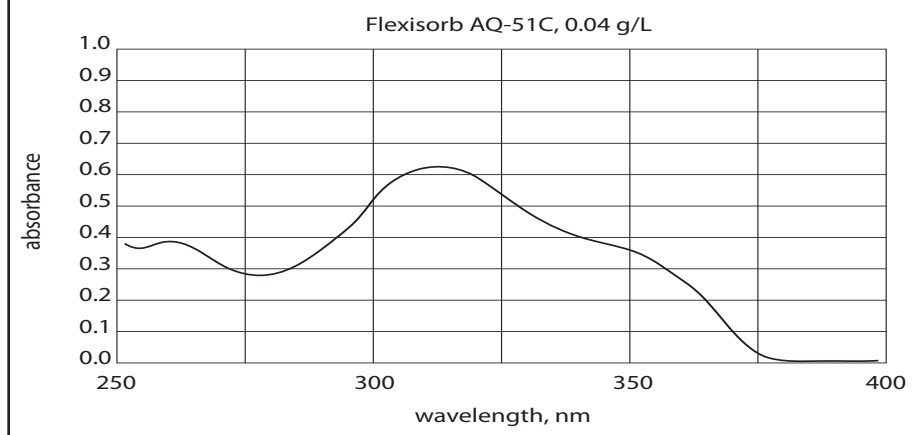
Packaging and Handling

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

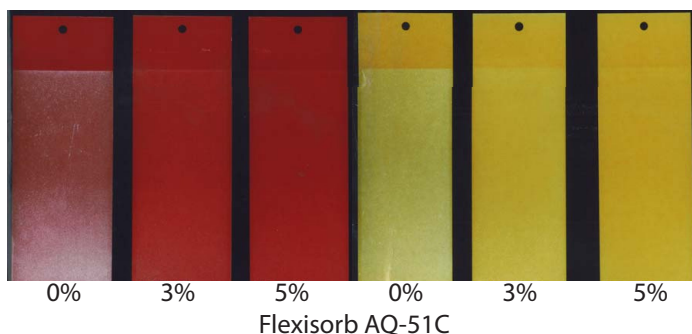
Water dispersible UV absorber

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
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

Formulation notes:

- **Slowly add Flexisorb AQ-51C to water first, while mixing with good agitation**
- High shear mixing is not necessary, but good agitation needs to be used for the water and during slow addition of Flexisorb AQ-51C
- **Add Flexisorb AQ-51C to cold or room temperature water. Do not add to warm or hot water.**
- Review product information for Thetapel AM-5010, Flexicon LC-65, and Flexiclean SS-100 for product use details.

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. ID# 20210923