



# Flexisorb™ AQ-50

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 & coverage due to small particle size microemulsion
- Highly efficient
- Disperses with slow addition and good agitation
- WERCS ID number: WPS1344829
- WERCS Valication number: 1344829

## Applications

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

## Technical Information

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

Flexisorb AQ-50 is based on well proven and accepted benzotriazole chemistry. Unlike water soluble UV absorbers, Flexisorb AQ-50 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-50 is a liquid which dilutes in cold or room temperature water with good agitation and slow addition.

## Typical Properties

PROPERTY	VALUE
Appearance	Clear, pale yellow to amber liquid
Odor	Mild
Ionic character	Anionic
Water solubility	Microemulsifiable
Active content, %	55.0±5.0
pH (1% aq.)	7±1
Density@25°C	1.05±0.02
Boiling Point	Approx. 100°C
Flash point	Does not ignite below 100°C
Storage	Stable to freezing
Shelf life	12 months

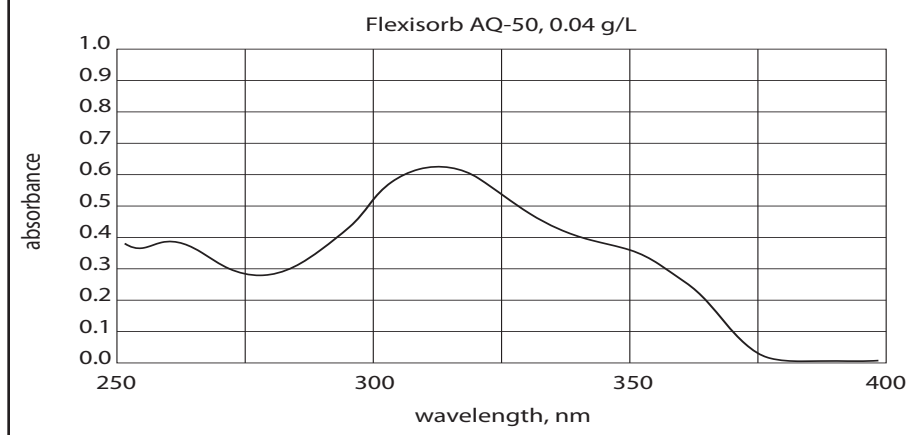
## Packaging and Handling

Flexisorb AQ-50 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-50 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*

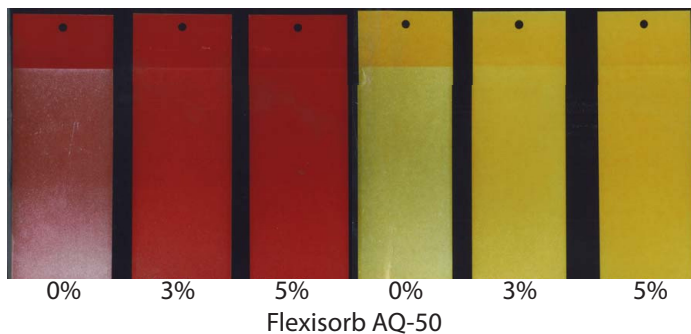
## Flexisorb AQ-50: Water-dispersible UV absorber

Flexisorb AQ-50 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-50 is highly efficient.

The key benefit with Flexisorb AQ-50 is that the highly efficient benzotriazole-based UV absorber active ingredient is not water-soluble, but instead is micro-emulsifiable. This delivers 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-50 provides more uniform coverage for superior performance compared to competitive alternatives. Flexisorb AQ-50 forms a clear, stable microemulsion in cold water with good agitation, for advantages over paste type UV absorbers that require high shear agitation.

Recommended use levels vary from 0.25 to 5.0% depending on the application, application rate, and desired performance. Flexisorb AQ-50 can be added to most water based anionic, amphoteric, or nonionic coatings to provide protection against UV degradation. For cationic compatible systems, use Flexisorb AQ-51C.

The panel below illustrates the effectiveness of Flexisorb AQ-50 in protecting coatings against color change. In this example, Flexisorb AQ-50 concentrations are at 0%, 3% and 5% for each color. Note that after a 3 year Florida sun exposure, the 5% Flexisorb AQ-50 treated coating showed almost no degradation, while the untreated (0% panels) exhibited severe color change.



The following example formulations illustrate the flexibility of Flexisorb AQ-50:

Water Repellent for apparel and upholstery	
Ingredient	Wt. %
Water	to 100
Flexisorb AQ-50	0.25-1.0
Nonionic or anionic water repellent	10.0
Leather Cleaner and Conditioner	
Ingredient	Wt. %
Water	to 100
Flexisorb AQ-50	1.0-4.0
Flexicon LC-65	25.0-35.0
Vinyl/Tire Dressing	
Ingredient	Wt. %
Water	to 100
Flexisorb AQ-50	1.0-4.0
Flexiclean SS-100	0.5
Latex Paint	
Ingredient	Wt. %
Latex paint	96-98
Flexisorb AQ-50	2-4
<p><b>Formulation notes:</b></p> <ul style="list-style-type: none"> <li>• <b>Slowly add Flexisorb AQ-50 to water first, while mixing with good agitation.</b></li> <li>• High shear is not necessary, but good agitation needs to be used for the water and during the slow addition of Flexisorb AQ-50.</li> <li>• <b>Only add Flexisorb AQ-50 to cold or room temperature water.</b> Do not add to warm or hot water.</li> <li>• Review product information for Flexipel AM-95, Flexicon LC-65, and Flexiclean SS-100 for product use details.</li> </ul>	

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