



innovative chemical technologies, inc.

FLEXISORB AQ-50

Technical Data Sheet

- ◆ **Emulsifiable Ultraviolet Light Absorber For Aqueous Systems**
- ◆ **Readily 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**
- ◆ **Easy To Use And Highly Efficient**

APPLICATIONS

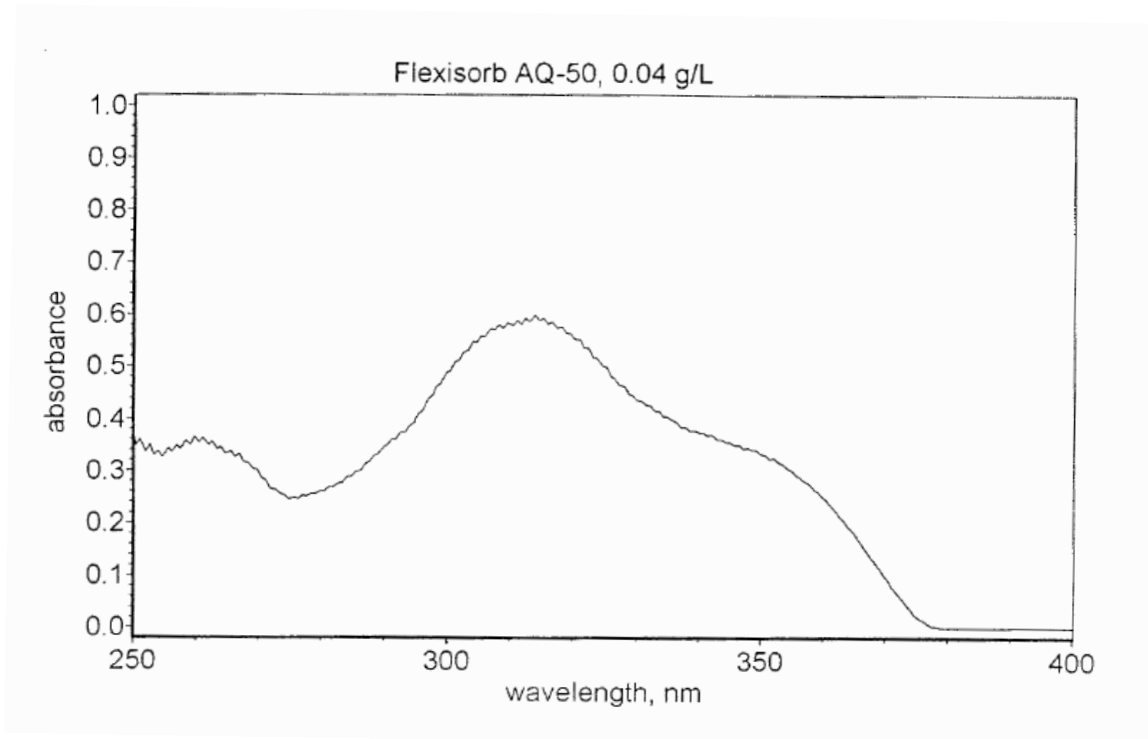
- ◆ **Carpet**
- ◆ **Upholstery**
- ◆ **Apparel (Fabrics of all types)**
- ◆ **Paints And Coatings**
- ◆ **Tire Dressings**
- ◆ **Interior Car Vinyl/Leather Dressings**

TECHNICAL INFORMATION

Flexisorb AQ-50 is a highly effective, easy to use, UV absorber designed for use in water based systems. It is easy to use and highly effective because it spontaneously forms micro-emulsions when diluted in water, yielding very stable, clear emulsions. The very small particle size (less than 50 nanometers) of the micro-emulsions provide more uniform surface coverage as compared to other UV absorbers that form unstable, large particle size dispersions and yield non-uniform surface coverage.

Flexisorb AQ-50 is based on well proven and accepted benzotriazole chemistry. Unlike other water based UV light absorbers, Flexisorb AQ-50 is not water soluble but forms micro-emulsions when diluted in water. Since Flexisorb AQ-50 is water insoluble, it is more durable than water soluble UV absorbers. In addition, Flexisorb AQ-50 is much easier to work with and has better shelf stability than paste type UV light absorbers in that it is liquid and easily dilutes in water with a minimal amount of stirring. There is no need for high shear agitation.

The following is an absorption UV spectrum of a 0.04g/L microemulsion of Flexisorb AQ-50 and an indication that even at low concentrations, Flexisorb AQ-50 will provide UV protection.



FORMULARY

Recommended use levels vary from 0.25% to 5.0% Flexisorb AQ-50 depending on the application, application rate, and desired performance. Flexisorb AQ-50 can be added to most any water based anionic, amphoteric, or nonionic coating to provide UV protection but is not compatible with cationics.

Some suggested formulations include:

Oil & Water Repellent (for apparel and upholstery)

<u>Ingredient</u>	<u>Wt %</u>
Water	Balance
Flexisorb AQ-50	0.25 - 1.0
Flexipel AM-95	10.0

Leather Cleaner and Conditioner

<u>Ingredient</u>	<u>Wt %</u>
Water	Balance
Flexisorb AQ-50	1.0 - 4.0
Flexicon LC-65	25.0 - 35.0

Latex Paint

<u>Ingredient</u>	<u>Wt %</u>
Latex Paint	96.0 - 98.0
Flexisorb AQ-50	2.0 - 4.0

Vinyl/Tire Dressing

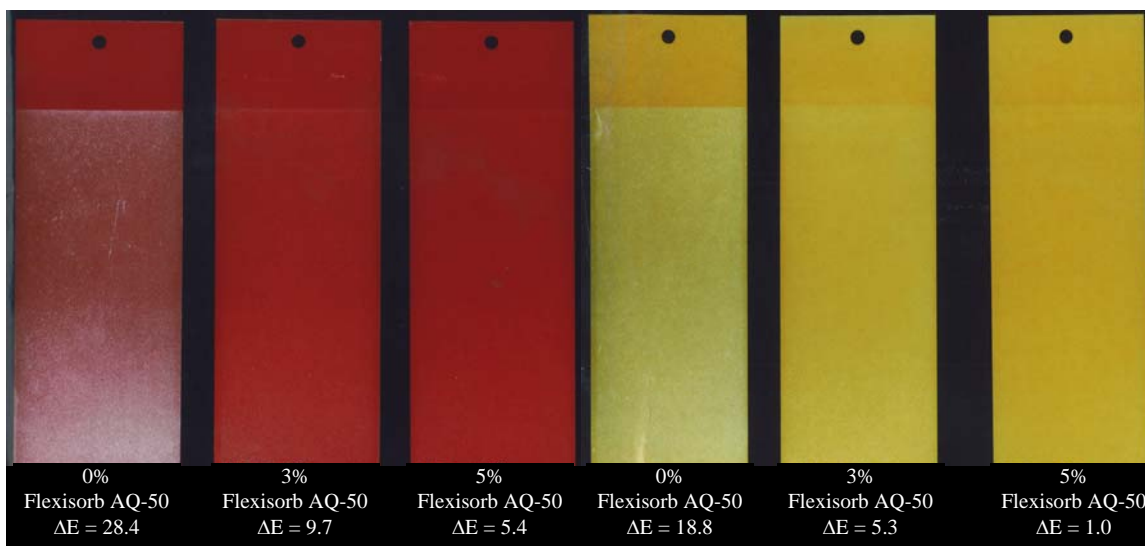
<u>Ingredient</u>	<u>Wt %</u>
Water	Balance
Flexisorb AQ-50	1.0 - 4.0
Flexiclean SS-100	20.0 - 35.0

Note:

- 1. Add AQ-50 to water first while mixing. High shear is not necessary with AQ-50. Water must be mixing during addition of AQ-50.**
- 2. Add AQ-50 to room temperature or cold water. AQ-50 should not be added to hot or warm water.**
- 3. Review ICT data sheets on Flexipel AM-95 and Flexicon LC-65 for complete details.**

If you are currently using a UV absorber in a water based system, the best place to start is to replace it with an equal level of AQ-50.

Demonstration



The photos above show the effect of Flexisorb AQ-50 at various levels in aqueous coatings on color change after 3 years of Florida exposure.

TYPICAL PROPERTIES

Appearance	Clear, Pale Yellow to Amber Liquid
pH(1% solution)	6 - 8
Density @ 25 C	1.05 g/ml (8.75 lbs/gal)
Water Solubility	Microemulsifiable
Odor	Mild
Boiling Point	100 C

PACKAGING/HANDLING

Flexisorb AQ-50 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.