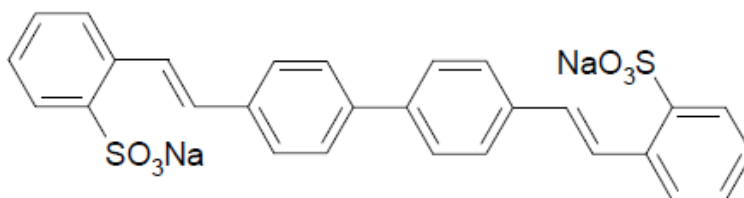


Tinopal® NFW LIQ

Product Description	Tinopal NFW LIQ is a fluorescent optical brightener for water-based coating and overprint varnish applications.
Key Features & Benefits	<ul style="list-style-type: none">- Brilliant bluish whitening effects- Good compatibility in a wide range of resins- For indoor use only
Chemical Composition	Approximately 20% solution of 4,4'-bis(2-sulfoxyryl)-biphenyl disodium salt



Properties

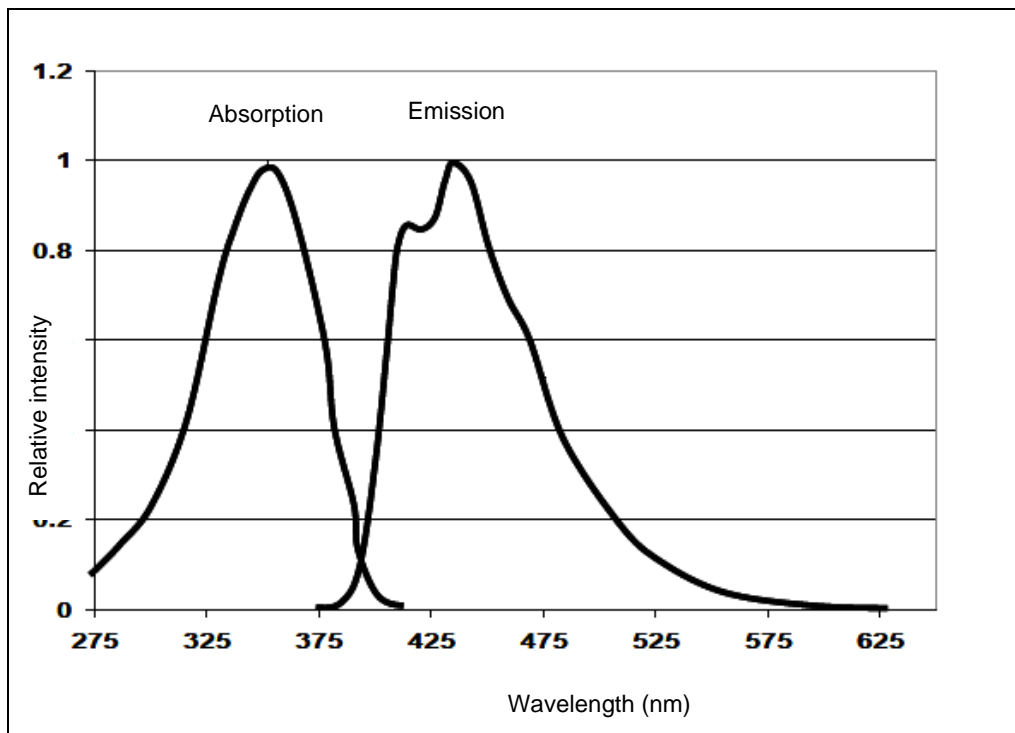
Typical Properties	Appearance	yellow-green liquid
	CAS number	27344-41-8
	Molecular weight	562.5
	Density at 20°C (68°F)	~ 1.17
	Dynamic viscosity at 20°C (68°F)	102
	<u>Solubility at 25°C (g/100 g solution)</u>	
	Acetone	0.6
	Dimethyl formamide (DMF)	> 50
	Diethyl adipate	5.8
	Dioxane	1.4
	Dowanol ¹	> 50
	Texanol ²	7.8
	Methanol	> 50
	Water	> 50

These typical values should not be interpreted as specifications.

¹Trademark of The Dow Chemical Company

²Registered trademark of Eastman Chemical Company

**Absorption and Emission
Spectra in a 1:1 blend of DMF
and water
(cell thickness = 1cm)**



Application

Tinopal NFW LIQ is a fluorescent optical brightener that provides brilliant bluish whitening effects with good compatibility in a wide range of resins in overprint varnishes and coating applications.

Tinopal NFW LIQ is recommended for applications such as:

- Water-based white and pastel tone paints where it intensifies the degree of whiteness
- Water-based clear coats and overprint varnishes where it is used to mask the yellowish inherent color and to intensify the brilliance of white and colored base coats

Processing

If Tinopal NFW LIQ is to be used in combination with a UV absorber, the absorption spectrum of the latter should leave an open window in the near UVA for the optical brightener.

Due to the intrinsic light fastness properties of optical brighteners, Tinopal NFW LIQ is recommended for indoor use only.

Recommended Concentrations

The amount of Tinopal NFW LIQ required for optimum performance should be determined in laboratory trials covering a concentration range and is dependent upon the desired brightening effect.

Application

Clear coats and overprint varnishes
White - pigmented coatings

Weight %

0.1 – 0.5% on binder solids
0.5 – 3% on pigment weight

Safety

General

The usual safety precautions when handling chemicals must be observed. These include the measures described in Federal, State, and Local health and safety regulations, thorough ventilation of the workplace, good skin care, and wearing of protective goggles.

Safety Data Sheet

All safety information is provided in the Safety Data Sheet for Tinopal NFW LIQ.

Storage

Please refer to the "Handling and Storage of Polymer Dispersions" brochure.

Important

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