

® = Registered trademark of BASF  
in many countries.

# Tinopal® CBS SP Slurry 33

**Fluorescent Whitening Agent for Laundry Products**

<b>Characterization</b>	Fluorescent Whitening Agent dispersion for incorporation in detergents, giving brilliant white effects on cellulosic fibers over the whole temperature range, especially from cold to medium washing temperatures.
<b>Chemical nature</b>	4,4'-Distyryl biphenyl derivative (DSBP)
<b>PRD-No.*</b>	30475200  * BASF's commercial product numbers.
<b>Applications</b>	Tinopal CBS SP Slurry 33 is equally suitable for incorporation in conventional or compact washing powders, liquid detergents, industrial detergents, detergent bars, washing creams, after rinse softeners, soaps and boosters due to its very good stability and solubility.
<b>Features/benefits</b>	<p><b>Improved detergent aspect</b> Tinopal CBS SP Slurry 33 significantly improves the shade consistency and white appearance of detergents such as conventional and compact powders, soaps, liquid detergents and softeners.</p> <p><b>High whiteness delivery</b> Tinopal CBS SP Slurry 33 yields intense white effects on cellulosic fibers over the whole temperature range, i. e. from cold to hot washings.</p> <p><b>Excellent cold wash performance</b> Tinopal CBS SP Slurry 33 incorporated in detergents is highly soluble in water at low temperatures and yields therefore high white effects even at low washing temperatures and short washing times.</p> <p><b>Very good leveling properties</b> Due to its good solubility, Tinopal CBS SP Slurry 33 demonstrates very good leveling properties: This is an important factor with compact powders and direct dosing.</p> <p><b>Improved stability</b> Tinopal CBS SP Slurry 33 is stable against bleaching agents such as hypochlorite and peroxide and also to alkali, acids and perspiration.</p> <p><b>Improved light fastness</b> Tinopal CBS SP Slurry 33 exhibits very good wet and dry light fastness. Ensures whiteness consistency even when washing is dried outside.</p> <p><b>Low spotting</b> Due to its good leveling properties Tinopal CBS SP Slurry 33 is a low spotting FWA. A critical factor for compact and liquid detergents.</p> <p><b>Shade consistency</b> Even on repeated washing Tinopal CBS SP Slurry 33 delivers an intense whiteness on cellulosic fibers without greening. In other words, white stays whiter longer.</p> <p><b>Improved detergent production process and quality consistency</b> Tinopal CBS SP Slurry 33 is a highly flowable suspension ensuring a more homogeneous dispersion of FWA in detergent powder and bar laundry products, as well as superior dispersion/dissolution in liquids. It can be easily and accurately handled via pump and metering devices.</p> <p><b>Improved plant hygiene</b> Tinopal CBS SP Slurry 33 improves plant hygiene due to zero dusting and no direct FWA contact for plant operators.</p> <p><b>Environmentally sound</b> Tinopal CBS SP Slurry 33 is delivered in containers that can be recycled. There is no packaging to dispose.</p>

## Guidelines for use

Tinopal CBS SP Slurry 33 can be easily and safely dispensed e.g. by pumping in the course of all normal detergent manufacturing operations such as spray-drying, agglomerating, post blending and spray blending.

The recommended areas of application for Tinopal CBS SP Slurry 33 are summarized below together with incorporation levels based on detergent weight.

Conventional detergent powders	0.15 – 0.75%
Compact detergent powders	0.30 – 1.20%
Unstructured liquid detergents	0.15 – 1.20%
Structured liquid detergents	0.15 – 0.45%
Anhydrous liquid detergents	0.30 – 1.20%
Detergent bars	0.15 – 0.45%
Soap bars	0.06 – 0.15%
Industrial detergents	0.60 – 3.00%
Rinse softeners	0.06 – 0.15%
Boosters	0.60 – 3.00%
Creams	0.15 – 0.45%

## Physical Stability

Neither significant phase separation nor sedimentation are observed when stored without agitation at temperatures of 5 to 35 °C for 2 months. Over longer storage periods some phase separation may occur which can be homogenized upon agitation. Although testing at 5 to 35 °C has shown no adverse effects, we would recommend to protect the product from extreme temperatures/sunlight and to limit storage to 3 months. The storage of Tinopal CBS SP Slurry 33 in a vessel with some form of stirring or agitation will allow extension of storage time.

## Viscosity

The viscosity is dependent on shear rate. Tinopal CBS SP Slurry 33 stays flowable during storage at room temperature for a year. Due to increase in viscosity, Tinopal CBS SP Slurry 33 should never be stored in an environment where the temperature is above 40 °C.

## Cold temperature stability

Tinopal CBS SP Slurry 33 does not freeze until approx. -2 °C. When thawed, it becomes liquid at approx. 5 °C and remains homogeneous.

## Physical Properties

Physical form	Flowable suspension suitable for pumping
Color	Yellow
Active content	30% ± 1.5%
UV/Vis Absorbance	381 ± 13 (1% dilution, 1 cm, dist. Water, 350 nm)
pH	8.0 ± 1.0

**Registration**

Free in all countries.

**Packaging**

Available in 50 kg, 200 kg, and 1000 kg.

**Handling & Safety**

Since Tinopal CBS SP Slurry 33 is highly efficient, it can be incorporated into laundry detergents at lower active concentrations than conventional FWAs. Extensive tests carried out to date have shown that at the concentrations indicated in this circular, Tinopal CBS SP Slurry 33 can be used without hazard for the recommended applications. Tinopal CBS SP Slurry 33 has been found to be degradable in the aquatic environment. Tinopal CBS SP Slurry 33 undergoes rapid photo degradation and forms metabolites that are readily biodegradable.

In accordance with good industrial practice, handle with care and prevent contamination of the environment. For more detailed information please refer to the material safety data sheet.

Detailed information about handling and storage of Tinopal CBS SP Slurry 33 is given separately.

**Note**

This document, or any answers or information provided herein by BASF, does not constitute a legally binding obligation of BASF. While the descriptions, designs, data and information contained herein are presented in good faith and believed to be accurate, it is provided for your guidance only. Because many factors may affect processing or application/use, we recommend that you make tests to determine the suitability of a product for your particular purpose prior to use. It does not relieve our customers from the obligation to perform a full inspection of the products upon delivery or any other obligation. NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE.

February 2011