SAFETY DATA SHEET

TINOPAL OPTICAL BRIGHTENER

CAS No.: Proprietary blend

This Safety Data Sheet is issued by Suraj Chemicals as the distributor/supplier of record, based on manufacturer and published GHS / regulatory reference data for this substance. Users should also consult the specific manufacturer's SDS where available.

1. IDENTIFICATION

GHS Product identifier

TINOPAL OPTICAL BRIGHTENER
Fluorescent whitening agent (FWA), stilbene-derivative type

CAS: Proprietary blend

Other means of identification

Not relevant

Recommended use of the chemical and restrictions on use

Relevant uses: Optical brightener/fluorescent whitening agent for textiles, paper, detergents and plastics, to impart a whiter/brighter visual appearance. For industrial user only.

Uses advised against: All uses not specified in this section or in section 7.3.

Supplier's details

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2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS:
This product is a proprietary formulation without a single CAS number. Classification of this product has been carried out in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS), based on well-established, class-typical hazard data for this product category (see 2.3 and section 16). Batch-specific classification may vary by shade/grade – refer to the product label or contact Suraj Chemicals for the current classification.

Not classified as hazardous under GHS acute physical/health hazard criteria, based on class-typical data for stilbene-type fluorescent whitening agents; may cause mild eye/skin irritation from concentrate

GHS label elements, including precautionary statements

GHS: Not classified

Hazard statements

Not classified as hazardous under GHS physical, health or environmental hazard criteria, based on class-typical data.

Precautionary statements

P264: Wash hands thoroughly after handling.
P280: Wear protective gloves/eye protection.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
General industrial hygiene practices apply.

Other hazards which do not result in classification

This is a proprietary blend (trade-name product); the individual stilbene-derivative active(s), carrier/dispersant components, their exact concentrations and any minor hazardous constituents below labelling thresholds are Available on request. No hazards other than those noted are known based on class-typical data. Fine dust (powder grade) may present a combustible dust hazard.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances

Chemical description: Fluorescent whitening agent (FWA), stilbene disulfonate-derivative type (e.g. distyrylbiphenyl or diaminostilbene disulfonic acid derivative class), formulated for textile, paper, detergent or plastics whitening applications

Non-applicable – this product is not a single substance (see 3.2).

Mixtures

In accordance with Annex 4.3.3 of the GHS, the product is a proprietary mixture:

Identification	Chemical Name / Classification	Concentration
CAS: Proprietary blend	Tinopal Optical Brightener — Not classified – Not classified	Available on request (proprietary formulation)

This is a proprietary formulation. Exact composition, individual component CAS numbers and precise concentrations are confidential and are "Available on request" from Suraj Chemicals (subject to a signed confidentiality agreement) or from the original manufacturer. The hazard information in this SDS reflects the well-established, class-typical hazard profile for this type of product.

4. FIRST AID MEASURES

Description of necessary first-aid measures

Request medical assistance if symptoms occur or persist, showing the SDS of this product.

By inhalation

Remove the person affected from the area of exposure to fresh air. Seek medical attention if respiratory discomfort persists.

By skin contact

Wash skin thoroughly with plenty of water and soap. Remove contaminated clothing. Seek medical attention if irritation persists.

By eye contact

Rinse eyes thoroughly with lukewarm water for at least 15 minutes, holding eyelids open. Remove contact lenses if present and easy to do. Seek medical attention if irritation persists.

By ingestion/aspiration

Rinse the mouth with water. If a large quantity is swallowed or the person feels unwell, seek medical attention.

Most important symptoms/effects, acute and delayed

Acute and delayed effects are indicated in sections 2 and 11.

Indication of immediate medical attention and special treatment needed, if necessary

Not relevant – treat symptomatically

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Suitable: Water spray/fog, foam, dry chemical powder, carbon dioxide – suit surrounding fire
Unsuitable: None known

Specific hazards arising from the chemical

Not classified as flammable or explosive. On combustion may emit oxides of carbon, nitrogen and sulfur, and, depending on the specific formulation, other decomposition products typical of the substance class (see section 10).

Special protective actions for fire-fighters

Evacuate all non-essential personnel. Wear self-contained breathing apparatus and full protective clothing in case of significant fire involving this product.

Additional provisions

Cool fire-exposed containers with water spray. Contain fire-fighting water to prevent environmental release.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Isolate leaks provided there is no additional risk for the people performing this task. Personal protection equipment must be used against potential contact with the spilt product (see section 8). Evacuate the area and keep out those who do not have protection.

For emergency responders

Wear protective equipment. Keep unprotected persons away. See section 8.

Environmental precautions

Avoid dust/spray generation. Prevent large quantities from entering drains or watercourses (may impart colour/BOD load). Notify the relevant authority in case of significant environmental release.

Methods and materials for containment and cleaning up

Sweep up/absorb (avoid generating dust for powders; use inert absorbent for liquids/pastes) and place in a labelled container for reuse or disposal. Wash residual area with water.

Reference to other sections

See sections 8 and 13.

7. HANDLING AND STORAGE

Precautions for safe handling

A. General precautions for safe use

Avoid generating and inhaling dust/mist. Use local exhaust ventilation where dust/mist may be generated. Avoid contact with eyes and prolonged skin contact.

B. Technical recommendations for the prevention of fires and explosions

Not applicable – product is not flammable or explosive under normal conditions.

C. Technical recommendations on general occupational hygiene

Do not eat or drink during the process; wash hands afterwards with suitable cleaning products.

D. Technical recommendations to prevent environmental risks

Provide tight electrical equipment well protected against corrosion. Avoid atmospheric emissions. Warn people about the dangers of the product. Follow the protective measures given in the exposure controls/personal protection section. In industrial installations, apply the rules for the prevention of major accidents (consult an expert).

Conditions for safe storage, including any incompatibilities

A. Specific storage requirements

Minimum Temp.	5°C
Maximum Temp.	35°C
Maximum time	12–24 Months in original sealed packaging (grade-dependent; see product label/COA)

B. General conditions for storage

Store in a cool, dry, well-ventilated place, protected from direct sunlight/UV (may affect brightening performance) and strong oxidizers, in tightly closed containers/bags. For additional information see subsection 10.5.

Specific end use(s)

Except for the instructions already specified, it is not necessary to provide any special recommendation regarding the uses of this product.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

No specific occupational exposure limit has been established for this proprietary formulation under the Factories Act, 1948. Apply the general limit for particulates/aerosols not otherwise classified/specified (PNOS/PNOC) as a good-practice reference value.

Identification	Occupational Exposure Limit Type	Value
Tinopal Optical Brightener CAS: Proprietary blend	Particulates/Aerosols Not Otherwise Specified – TWA (8 hrs, inhalable)	10 mg/m³ (reference value)

Appropriate engineering controls

It is recommended to use localized extraction in the work area as a collective protection measure to avoid exceeding occupational exposure limits, in addition to individual protective equipment (PPE) as needed. Consult the manufacturer's information leaflet for storage, use, cleaning and maintenance of PPE.

B. Respiratory protection

Not normally required with adequate ventilation. Use a dust/mist mask (FFP1/FFP2) if airborne levels are high.

C. Specific protection for the hands

Protective gloves (e.g. nitrile) for general handling.

D. Eye and face protection

Safety glasses/chemical splash goggles.

E. Bodily protection

Standard industrial workwear; apron for bulk/liquid handling.

F. Additional emergency measures

Emergency shower (ANSI Z358-1, ISO 3864-1:2011, ISO 3864-4:2011) and eyewash stations (DIN 12 899, ISO 3864-1:2011, ISO 3864-4:2011) should be available.

Environmental exposure controls

Avoid environmental spillage of both the product and its container. See subsection 7.1.D.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	
Physical state at 20°C	Solid (powder/granules) or liquid dispersion (grade-dependent)
Appearance	Fine powder or aqueous dispersion/paste
Color	White to pale yellow (may fluoresce blue-white under UV light)
Odor	Odorless to slight
Odour threshold	Not relevant *
Volatility	
Boiling point at atmospheric pressure	Not relevant (decomposes before boiling, solid form)
Vapour pressure at 20°C	Negligible
Evaporation rate at 20°C	Not relevant (solid) / slow (aqueous dispersion grade)
Product Description	
Density / Relative density at 20°C	Available on request (class-typical ~1.1–1.3 g/cm³ for stilbene disulfonate salts)
Dynamic / Kinematic viscosity	Not relevant (solid) / low-moderate (liquid dispersion grade)
Concentration	Available on request (standardised active content, grade-dependent)
pH (1% aqueous solution/dispersion)	Class-typical 7–9 (near neutral to mildly alkaline) – confirm on COA
Vapour density at 20°C	Not relevant *
Partition coefficient n-octanol/water 20°C	Available on request (class-typical: low, highly polar/sulfonated molecule)
Solubility in water at 20°C	Soluble to highly soluble (stilbene disulfonate salts are typically water-soluble)
Decomposition temperature	Available on request (class-typical >250°C)
Melting point/freezing point	Not relevant (decomposes rather than melts, solid form)
Flammability	
Flash Point	Non-applicable (solid) / non-applicable (aqueous dispersion)
Flammability (solid, gas)	Not readily combustible as bulk; fine dust can form a combustible dust cloud (powder grade)
Autoignition temperature	Not relevant *
Lower / Upper flammability limit	Not relevant *
Particle Characteristics	
Median equivalent diameter	Fine powder (grade-dependent) / non-applicable for liquid dispersion

** Not relevant/not established for this proprietary grade – contact Suraj Chemicals for the current product data sheet/certificate of analysis. Values shown are class-typical reference ranges, not batch-specific guaranteed figures.*

Other information

Explosive properties	Not relevant *; fine dispersed dust (powder grade) may present a combustible dust hazard – control ignition sources
Oxidising properties	Not an oxidizer
Corrosive to metals	Not classified
Heat of combustion	Not relevant *
Surface tension at 20°C	Not relevant *
Refraction index	Not relevant *

10. STABILITY AND REACTIVITY

Reactivity

No significant reactivity hazard under normal conditions of storage, handling and use.

Chemical stability

Chemically stable under the indicated conditions of storage, handling and use.

Possibility of hazardous reactions

Under the specified conditions, hazardous reactions are not expected.

Conditions to avoid

Shock/Friction	Contact with Air	Increase in Temperature	Sunlight	Humidity
Not applicable	Not applicable	Avoid excessive heat/prolonged storage above max. temp.	Avoid prolonged direct exposure (may affect colour/potency)	Keep dry/sealed to avoid degradation or caking

Incompatible materials

Strong Oxidizing Agents	Strong Acids/Alkalis	Other
Avoid contact	Avoid contact – may affect product stability/colour	Avoid mixing with incompatible dyeing/finishing auxiliaries without trial

Hazardous decomposition products

Oxides of carbon, nitrogen and sulfur (formulation-dependent) on thermal decomposition/combustion.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Substance-specific (batch) toxicological test data are not available for this proprietary formulation. The following reflects well-established, class-typical toxicological information for this type of product; treat with normal industrial hygiene precautions:

A. Ingestion (acute effect)

Low acute oral toxicity is well established for stilbene-type fluorescent whitening agents as a class (widely used in detergents and paper in contact with skin/food-packaging applications at regulated levels).

B. Inhalation (acute effect)

Dust (powder grade) may cause mild, transient irritation of the respiratory tract. Not classified as an acute inhalation toxicity hazard.

C. Contact with skin and eyes (acute effect)

Not classified as a skin or eye irritant under GHS criteria based on class-typical data; concentrated material/dust may cause mild, transient irritation on direct contact.

D. CMR effects (carcinogenicity, mutagenicity, reproductive toxicity)

Classification criteria for carcinogenicity, mutagenicity and reproductive toxicity are not met based on available class-typical data for stilbene-type FWAs.

E. Sensitizing effects

Classification criteria for respiratory or skin sensitisation are not met based on available class-typical data.

F. Specific target organ toxicity (STOT) – single exposure

Classification criteria are not met based on available data.

G. Specific target organ toxicity (STOT) – repeated exposure

Classification criteria are not met based on available data.

H. Aspiration hazard

Not applicable (solid) / not classified (liquid dispersion).

Product-specific toxicological information

Identification	Acute Toxicity	Genus
Tinopal Optical Brightener CAS: Proprietary blend	LD50 oral: Available on request (class-typical for this product category: generally >2000 mg/kg)	Rat (class-typical)

12. ECOLOGICAL INFORMATION

May be harmful to aquatic organisms in some formulations; avoid release to the environment as a matter of good practice.

Toxicity

Quantitative aquatic toxicity (LC50/EC50) data specific to this formulation are not available and are “Available on request”. As a class, stilbene-type fluorescent whitening agents range from practically non-toxic to moderately toxic to aquatic organisms; some are noted for slow biodegradation and moderate persistence in surface water.

Persistence and degradability

Stilbene-disulfonate type FWAs are generally poorly to moderately biodegradable under standard aerobic conditions; some photodegrade under UV/sunlight exposure in surface water.

Bioaccumulative potential

Low bioaccumulation potential expected (high polarity/water solubility of sulfonated stilbene molecules).

Mobility in soil

Koc	Henry	Dry Soil	Moist Soil
Available on request	Negligible (non-volatile)	Not applicable (solid/dispersion)	Mobile (water-soluble)

Results of PBT and vPvB assessment

Not formally assessed for this specific formulation; class-typical data do not indicate PBT/vPvB properties, though some persistence in surface water has been noted for the FWA class generally.

Other adverse effects

Fluorescent under UV light; large releases could be detectable in receiving water under UV inspection. Not otherwise described.

13. DISPOSAL CONSIDERATIONS

Disposal methods

Dispose of as solid/liquid industrial waste via a licensed waste contractor, in accordance with local regulations. For packaging: empty thoroughly before disposal/recycling.

Refer to national and local regulations on waste management, including the Hazardous and Other Wastes (Management and Transboundary Movement) Rules.

14. TRANSPORT INFORMATION

Transport of dangerous goods by land (ADR 2023 / RID 2023)

14.1 UN number	Not assigned – non-hazardous for transport
14.2 UN proper shipping name	Non-applicable
14.3 Transport hazard class(es)	Not classified
14.4 Packing group	N/A
14.5 Environmental hazard	No
14.6 Special precautions for user	Non-applicable – product is not a dangerous good under ADR/RID/IMDG/IATA criteria
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

Transport of dangerous goods by sea (IMDG 41-22)

14.1 UN number	Not assigned – non-hazardous for transport
14.2 UN proper shipping name	Non-applicable
14.3 Transport hazard class(es)	Not classified
14.4 Packing group	N/A
14.5 Marine pollutant	No
14.6 Special precautions for user	Non-applicable
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

Transport of dangerous goods by air (IATA/ICAO 2024)

14.1 UN number	Not assigned – non-hazardous for transport
14.2 UN proper shipping name	Non-applicable
14.3 Transport hazard class(es)	Not classified
14.4 Packing group	N/A
14.5 Environmental hazard	No
14.6 Special precautions for user	Non-applicable
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

15. REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product in question

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of local circumstances, in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

Other legislation

Manufacture, Storage and Import of Hazardous Chemicals Rules 1989
The Factories Act, 1948 (Act No. 63 of 1948), as amended by the Factories (Amendment) Act, 1987 (Act 20 of 1987)
The Chemical Accidents (Emergency Planning, Preparedness, and Response) Rules, 1996
Public Liability Insurance Act, 1991

16. OTHER INFORMATION

Legislation related to safety data sheets

This safety data sheet has been designed in accordance with Annex 4 – Guidance on the preparation of Safety Data Sheets of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Texts of the legislative phrases mentioned in sections 2 and 3

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3.

Advice related to training

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources

PubChem (National Library of Medicine); European Chemicals Agency (ECHA) classification and labelling inventory; United Nations Economic Commission for Europe (UNECE) Model Regulations; ACGIH Threshold Limit Values. Specific proprietary composition and quantitative data: available on request from Suraj Chemicals.

Abbreviations and acronyms

ADR: European agreement concerning the international carriage of dangerous goods by road | IMDG: International maritime dangerous goods code | IATA: International Air Transport Association | ICAO: International Civil Aviation Organisation | COD: Chemical Oxygen Demand | BOD5: 5-day biochemical oxygen demand | BCF: Bioconcentration factor | LD50: Lethal Dose 50 | LC50: Lethal Concentration 50 | EC50: Effective Concentration 50 | Log-POW: Octanol-water partition coefficient | Koc: Partition coefficient of organic carbon | IARC: International Agency for Research on Cancer

Disclaimer: The information contained in this safety data sheet is based on sources, technical knowledge and current legislation, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product; it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within Suraj Chemicals' awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

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