

## SAFETY DATA SHEET

# Thioflavin T, High Purity Grade

## SECTION 1: Identification

### 1.1. Product identifier

#### Trade name

Thioflavin T, High Purity Grade

#### Other names / Synonyms

80033: Thioflavin T, High Purity Grade, 100 mg

#### Product no.

80033

#### Other means of identification

CAS No.: 2390-54-7

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### Relevant identified uses of the substance or mixture

Use as laboratory reagent. For research use only. Not for food, drug, household, or cosmetic use.

Restricted to professional and industrial use.

#### Uses advised against

None known.

### 1.3. Details of the supplier of the safety data sheet

#### Company and address

##### Biotium, Inc.

46117 Landing Parkway

CA 94538 Fremont

USA

T: +1 510-265-1027

Fax: +1 510-265-1352

<http://www.biotium.com>

#### E-mail

[techsupport@biotium.com](mailto:techsupport@biotium.com)

#### SDS date

12/3/2025

#### SDS Version

1.0

### 1.4. Emergency telephone number

In an emergency call 911

Alberta / Northwestern Territories (PADIS): 1-800-332-1414

British Columbia (DPIC): 1-800-567-8911

Manitoba: 1-855-7POISON (1-855-776-4766)

New Brunswick: 911

Nova Scotia / Prince Edward Island (IWK): 1-800-565-8161

Ontario (OPC): 1-800-268-9017

Québec (CAPQ): 1-800-463-5060

Saskatchewan (PADIS): 1-866-454-1212

Yukon Territory: (867) 393-8700

Transport emergencies: Call CANUTEC at 1-888-CAN-UTEC (226-8832), 613-996-6666 or \*666 on a cellular phone (24 hours)

See also section 4 "First aid measures".

## SECTION 2: Hazard(s) identification

Classified as hazardous according to Hazardous Products Regulation SOR/2015-17 (as amended by SOR/2022-272).

### 2.1. Classification of the substance or mixture

Acute Tox. 3; H301, Toxic if swallowed.

Skin Sens. 1; H317, May cause an allergic skin reaction.

Eye Dam. 1; H318, Causes serious eye damage.

### 2.2. Label elements

#### Hazard pictogram(s)



#### Signal word

Danger

#### Hazard statement(s)

Toxic if swallowed. (H301)

May cause an allergic skin reaction. (H317)

Causes serious eye damage. (H318)

#### Precautionary statement(s)

##### General

Not applicable.

##### Prevention

Avoid breathing dust. (P261)

Wash hands and exposed skin thoroughly after handling. (P264)

Contaminated work clothing should not be allowed out of the workplace. (P272)

Wear eye protection/face protection/protective gloves. (P280)

##### Response

IF SWALLOWED: Immediately call a POISON CENTER/doctor. (P301+P310)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing. (P305+P351+P338)

Immediately call a POISON CENTER/doctor. (P310)

Specific treatment (see instructions on this label). (P321)

Rinse mouth. (P330)

If skin irritation or rash occurs: Get medical advice/attention. (P333+P313)

Take off contaminated clothing and wash it before reuse. (P362+P364)

##### Storage

Not applicable.

##### Disposal

Dispose of contents/container in accordance with local regulation.

(P501)

#### Hazardous substances

2-[4-(dimethylamino)phenyl]-3,6-dimethylbenzothiazolium chloride

## SECTION 3: Composition/Information on Ingredients

### 3.1. Substances

Product/substance	Identifiers	% w/w	Classification	Note
2-[4-(dimethylamino)phenyl]-3,6-dimethylbenzothiazolium chloride	CAS No.: 2390-54-7	95-100%	Acute Tox. 3, H301 Skin Sens. 1, H317 Eye Dam. 1, H318	

### 3.2. Mixtures

Not applicable. This product is a substance.

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

#### Other information

-  
No ingredients present at concentrations classified as harmful to health or the environment.

### SECTION 4: First-aid measures

#### 4.1. Description of first aid measures

##### General information

If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 911 and give immediate treatment (first aid).

Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

##### Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

##### Skin contact

Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.

If skin irritation occurs: Get medical advice/attention.

##### Eye contact

If in eyes: Flush eyes with plenty of water or salt water (20-30 °C) for at least 30 minutes and continue until irritation stops. Remove contact lenses. Make sure you flush under the upper and lower eyelids. Seek medical assistance immediately and continue flushing during transport.

##### Ingestion

In the case of ingestion, contact a doctor immediately. If the person is conscious, give them water. DO NOT try to induce vomiting unless this is recommended by a doctor. Hold head facing down to prevent vomit from returning to the mouth and throat. Prevent shock by keeping the injured person warm and calm. Initiate immediate resuscitation if breathing stops. If unconscious, roll the injured person into recovery position. Call an ambulance.

##### Burns

Not applicable.

#### 4.2. Most important symptoms and effects, both acute and delayed

Sensitisation: This product contains substances, which may trigger allergic reaction upon dermal contact.

Manifestation of allergic reactions typically takes place within 12-72 hours after exposure.

The product contains substances that cause serious eye damage. Contact with these substances can cause irreversible effects on the eye / serious eye damage.

#### 4.3. Indication of any immediate medical attention and special treatment needed

IF exposed or concerned:

Get immediate medical advice/attention.

#### Information to medics

Bring this safety data sheet or the label from this product.

### SECTION 5: Fire-fighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

#### 5.2. Special hazards arising from the substance or mixture

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Halogenated compounds  
Sulphur oxides  
Nitrogen oxides (NO<sub>x</sub>)  
Carbon oxides (CO / CO<sub>2</sub>)

### 5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact a poison centre in order to obtain further advice. See section 1 "Emergency telephone number".

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Avoid direct contact with spilled substances.

Ensure adequate ventilation, especially in confined areas.

Contaminated areas may be slippery.

### 6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.

Keep unauthorized persons away from the spill

### 6.3. Methods and material for containment and cleaning up

Limit spillage, sweep up and shovel into appropriate containers for disposal. Store in suitable, closed containers for disposal.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

### 6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Avoid direct contact with the product.

Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

### 7.2. Conditions for safe storage, including any incompatibilities

Store locked up. A sign warning of toxic materials shall be affixed the room and cupboard containing the product(s).

#### Recommended storage material

Always store in containers of the same material as the original container.

#### Storage conditions

Refrigerator 2°C to 8°C.

Protect from light.

Desiccate.

Keep container tightly closed in a dry and well-ventilated place.

#### Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

### 7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No substances are listed in any provincial list of substances with an occupational exposure limit.

### 8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

#### General recommendations

Smoking, drinking and consumption of food is not allowed in the work area.

#### Exposure scenarios

There are no exposure scenarios implemented for this product.

#### Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

#### Appropriate technical measures

Apply standard precautions during use of the product. Avoid inhalation of gas or dust.

Airborne gas and dust concentrations must be kept at a minimum and below current limit values (see above).

Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure emergency eyewash and showers are clearly marked.

Ensure that eyewash stations and safety showers are located within easy reach.

#### Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Pay special attention to hands, forearms and face.

#### Measures to avoid environmental exposure

Keep damming materials near the workplace. If possible, collect spillage during work.

#### Individual protection measures, such as personal protective equipment

##### Generally

Use only protective equipment with a recognized certification mark, e.g. the UL mark.

#### Respiratory Equipment

Type	Class	Colour	Standards
Not required; except in case of aerosol formation.			N/A



#### Skin protection

No specific requirements.

#### Hand protection

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.			



#### Eye protection

Type	Standards
Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards	EN166



Type	Standards
such as NIOSH (US) or EN 166(EU).	

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

#### Physical state

Solid

#### Colour

No data available.

#### Odour

No data available.

#### Odour threshold (ppm)

No data available.

#### pH

No data available.

#### Density (g/cm<sup>3</sup>)

No data available.

#### Kinematic viscosity

Does not apply to solids.

#### Particle characteristics

No data available.

#### Phase changes

##### Melting point/Freezing point (°C)

No data available.

##### Softening point/range (°F)

Does not apply to solids.

##### Boiling point (°C)

Does not apply to solids.

##### Vapour pressure

No data available.

##### Relative vapour density

Does not apply to solids.

##### Decomposition temperature (°C)

No data available.

#### Data on fire and explosion hazards

##### Flash point (°C)

Does not apply to solids.

##### Flammability (°C)

No data available.

##### Auto-ignition temperature (°C)

No data available.

##### Explosion limits (% v/v)

Does not apply to solids.

#### Solubility

##### Solubility in water

No data available.

##### n-octanol/water coefficient (LogK<sub>ow</sub>)

No data available.

##### Solubility in fat (g/L)

No data available.

### 9.2. Other information

**Other physical and chemical parameters**

No data available.

**Oxidizing properties**

No data available.

**SECTION 10: Stability and reactivity****10.1. Reactivity**

No data available.

**10.2. Chemical stability**

The product is stable under the conditions, noted in section 7 "Handling and storage".

**10.3. Possibility of hazardous reactions**

None known.

**10.4. Conditions to avoid**

Heat, flames and sparks.

**10.5. Incompatible materials**

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

**10.6. Hazardous decomposition products**

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Acute toxicity**

Toxic if swallowed.

**Skin corrosion/irritation**

Based on available data for the mixture, the classification criteria are not met.

**Serious eye damage/irritation**

Causes serious eye damage.

**Respiratory sensitisation**

Based on available data for the mixture, the classification criteria are not met.

**Skin sensitisation**

May cause an allergic skin reaction.

**Germ cell mutagenicity**

Based on available data for the mixture, the classification criteria are not met.

**Carcinogenicity**

Based on available data for the mixture, the classification criteria are not met.

**Reproductive toxicity**

Based on available data for the mixture, the classification criteria are not met.

**STOT-single exposure**

Based on available data for the mixture, the classification criteria are not met.

**STOT-repeated exposure**

Based on available data for the mixture, the classification criteria are not met.

**Aspiration hazard**

Based on available data for the mixture, the classification criteria are not met.

**Long term effects**

The product contains substances that cause serious eye damage. Contact with these substances can cause irreversible effects on the eye / serious eye damage.

**Other information**

None known.

**SECTION 12: Ecological information**

### 12.1. Toxicity

Based on available data for the mixture, the classification criteria are not met.

### 12.2. Persistence and degradability

Based on available data for the mixture, the classification criteria are not met.

### 12.3. Bioaccumulative potential

Based on available data for the mixture, the classification criteria are not met.

### 12.4. Mobility in soil

No data available.

### 12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

### 12.6. Other adverse effects

None known.

## SECTION 13: Disposal considerations

### Waste treatment methods

None of the components are listed

### Specific labelling

### Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

## SECTION 14: Transport information

	14.1 UN / ID UN proper shipping name	14.2 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
TDG	UN2811 TOXIC SOLID, ORGANIC, N.O.S.	Transport hazard class: 6.1 Label: 6.1 Classification code: T2 	III	No	Limited quantities: 5 kg Tunnel restriction code: (E) See below for additional information.
IMDG	UN2811 TOXIC SOLID, ORGANIC, N.O.S.	Transport hazard class: 6.1 Label: 6.1 Classification code: T2 	III	No	Limited quantities: 5 kg EmS: F-A S-A See below for additional information.
IATA	UN2811 TOXIC SOLID, ORGANIC, N.O.S.	Transport hazard class: 6.1 Label: 6.1 Classification code: T2 	III	No	See below for additional information.

\* Packing group

**\*\* Environmental hazards****Additional information**

This product is within scope of the regulations of transport of dangerous goods.

TDG / See Schedule 1 for any information on special provisions, requirements, or warnings in connection with transport. See part 3, for instructions in writing regarding mitigation of damages in relation to incidents or accidents during transport.

IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.

IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.

**14.6. Special precautions for user**

Not applicable.

**14.7. Transport in bulk according to Annex II of Marpol and the IBC Code**

No data available.

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****15.2. Canadian lists****NDSL**

2-[4-(dimethylamino)phenyl]-3,6-dimethylbenzothiazolium chloride

**DSL**

None of the components are listed

**15.4. Restrictions for application**

Restricted to professional and industrial use.

People under the age of 18 shall not be exposed to this product.

**15.5. Demands for specific education**

No specific requirements.

**Additional information**

Not applicable.

**15.7. Chemical safety assessment**

No

**Sources**

Hazardous Products Regulation SOR/2015-17 (as amended by SOR/2022-272)

**SECTION 16: Other information****Full text of H-phrases as mentioned in section 3**

H301, Toxic if swallowed.

H317, May cause an allergic skin reaction.

H318, Causes serious eye damage.

**The full text of identified uses as mentioned in section 1**

None known.

**Abbreviations and acronyms**

ANSI = American National Standards Institute

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

CAS = Chemical Abstracts Service

DSL = Domestic Substances List

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

HHNOC = Health Hazards Not Otherwise Classified

IARC = International Agency for Research on Cancer

IATA = International Air Transport Association

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of

1978. ("Marpol" = marine pollution)  
NDSL = Non-domestic substances list  
OECD = Organisation for Economic Co-operation and Development  
PBT = Persistent, Bioaccumulative and Toxic  
PHNOC = Physical Hazards Not Otherwise Classified  
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
SCL = A specific concentration limit.  
SOR = Statutory Orders and Regulations  
STEL = Short-term exposure limits  
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure  
STOT-SE = Specific Target Organ Toxicity - Single Exposure  
TDG = Transportation of Dangerous Goods  
TWA = Time weighted average  
UN = United Nations  
UVBC = Unknown or variable composition, complex reaction products or of biological materials  
VOC = Volatile Organic Compound  
vPvB = Very Persistent and Very Bioaccumulative  
WHIMS = Workplace Hazardous Materials Information System

#### **Additional information**

The classification of the mixture in regard of health hazards is in accordance with the calculation methods given by WHMIS 2022  
The information provided above is believed to be correct to our best knowledge, but does not purport to be all inclusive, and shall be used only as a guide. This material is sold for research purposes only and is not required to appear on the TSCA inventory. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals. Biotium shall not be held liable for any damage resulting from handling or contact with the above product.

#### **The safety data sheet is validated by**

Julianne Davis

#### **Other**

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

Country-language: CA-en