

## SAFETY DATA SHEET

## SuperHT PAP Pen 2.0

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

## 1.1. Product identifier

## Trade name

SuperHT PAP Pen 2.0

## Other names / Synonyms

23023: SuperHT PAP Pen 2.0 Mini, 2.5 mm tip

23024: SuperHT PAP Pen 2.0 Regular, 4 mm tip

## Product no.

23023, 23024

## 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)

## Revision

14/05/2026

## SDS Version

1.0

## 1.4. Emergency telephone number

Anti-poison center: +32 (0) 70 245 245 (every day, 24 hours a day)

See also section 4 "First aid measures".

## SECTION 2: Hazards identification

Classified according to Regulation (EC) No. 1272/2008 (CLP).

## 2.1. Classification of the substance or mixture

Asp. Tox. 1; H304, May be fatal if swallowed and enters airways.

Skin Irrit. 2; H315, Causes skin irritation.

STOT SE 3; H336, May cause drowsiness or dizziness.

Repr. 2; H361, Suspected of damaging fertility or the unborn child.

STOT RE 2; H373, May cause damage to organs through prolonged or repeated exposure.

## 2.2. Label elements

## Hazard pictogram(s)



#### Signal word

Danger

#### Hazard statement(s)

May be fatal if swallowed and enters airways. (H304)

Causes skin irritation. (H315)

May cause drowsiness or dizziness. (H336)

Suspected of damaging fertility or the unborn child. (H361)

May cause damage to organs through prolonged or repeated exposure. (H373)

#### Precautionary statement(s)

##### General

Not applicable.

##### Prevention

Obtain special instructions before use. (P201)

Wear eye protection/protective gloves. (P280)

##### Response

IF exposed or concerned: Get medical advice/attention. (P308+P313)

Get medical advice/attention if you feel unwell. (P314)

##### Storage

Store in a well-ventilated place. Keep container tightly closed. (P403+P233)

##### Disposal

Dispose of contents/container in accordance with local regulation.

(P501)

#### Hazardous substances

toluene

#### Additional labelling

#### 2.3. Other hazards

##### Additional warnings

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

This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2023/707.

## SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Not applicable. This product is a mixture.

#### 3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
toluene	CAS No.: 108-88-3 EC No.: 203-625-9 REACH: Index No.:	25-40%	Flam. Liq. 2, H225 Asp. Tox. 1, H304 Skin Irrit. 2, H315 STOT SE 3, H336 Repr. 2, H361 STOT RE 2, H373	[1], [3]

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

#### Other information

[1] European occupational exposure limit.

[3] According to REACH, Annex XVII, the substance is subject to restrictions.

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information

In the case of accident: Contact a doctor or casualty department – bring the label or this safety data sheet. The doctor can contact the Anti-poison center: +32 (0) 70 245 245 (every day, 24 hours a day)  
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 water or saline water (20-30 °C) for at least 5 minutes. Remove contact lenses. Seek medical assistance and continue flushing during transport.

#### Ingestion

IF SWALLOWED: Immediately call a POISON CENTER/doctor.  
Do not induce vomiting! If vomiting occurs, keep head facing down so that vomit does not get into the lungs. Call a doctor or ambulance. Symptoms of chemical pneumonia can appear after several hours. People who have swallowed the product should therefore be kept under medical attention for at least 48 hours.

#### Burns

Not applicable.

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

This product contains substances that can cause chemical pneumonia if swallowed. Symptoms of chemical pneumonia may appear after several hours.

Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

### 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: Firefighting measures

### 5.1. Extinguishing media

Not applicable.

### 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:

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 the anti-poison center: +32 (0) 70 245 245 (every day, 24 hours a day) in order to obtain further advice.

## 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.
- Avoid inhalation of vapours from spilled material.
- Contaminated areas may be slippery.

### 6.2. Environmental precautions

- Avoid discharge to lakes, streams, sewers, etc. In the event of leakage to the surroundings, contact local environmental authorities.

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

- Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.
- 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.
- Avoid contact during pregnancy and while nursing.
- 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

- Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

#### Recommended storage material

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

#### Storage conditions

- Room Temperature. For Biotium products where the label indicates room temperature or RT, this implies storage in ambient conditions between 20°C and 30°C.
- 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

- toluene
- Short term exposure limit (15 minutes) (mg/m<sup>3</sup>): 384
- Short term exposure limit (15 minutes) (ppm): 100
- Long term exposure limit (8 hours) (mg/m<sup>3</sup>): 77
- Long term exposure limit (8 hours) (ppm): 20

#### Annotations:

- D = The absorption of the agent through the skin, the mucous membranes or the eyes is an important part of the total exposure. Absorption is achieved both by direct contact and by the presence of the agent in the air.

- List of the limit values for exposure to chemical agents (KB van May 2021).

### DNEL

- toluene

<b>Duration:</b>	<b>Route of exposure:</b>	<b>DNEL:</b>
Long term – Local effects - General population	Dermal	0.1 mg/cm <sup>2</sup>
Long term – Local effects - Workers	Dermal	0.188 mg/cm <sup>2</sup>
Long term – Systemic effects - General population	Dermal	75 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	150 mg/kg bw/day
Long term – Local effects - General population	Inhalation	18.9 mg/m <sup>3</sup>
Long term – Local effects - Workers	Inhalation	75.37 mg/m <sup>3</sup>
Long term – Systemic effects - General population	Inhalation	18.9 mg/m <sup>3</sup>
Long term – Systemic effects - Workers	Inhalation	75.37 mg/m <sup>3</sup>
Short term – Local effects - General population	Inhalation	188.5 mg/m <sup>3</sup>
Short term – Local effects - Workers	Inhalation	377 mg/m <sup>3</sup>
Short term – Systemic effects - General population	Inhalation	188.5 mg/m <sup>3</sup>
Short term – Systemic effects - Workers	Inhalation	377 mg/m <sup>3</sup>
Long term – Systemic effects - General population	Oral	2.69 mg/kg bw/day

#### PNEC

toluene

<b>Route of exposure:</b>	<b>Duration of Exposure:</b>	<b>PNEC:</b>
Freshwater		0.68 mg/L
Freshwater sediment		16.39 mg/kg
Intermittent release (freshwater)		0.68 mg/L
Marine water		0.68 mg/L
Marine water sediment		16.39 mg/kg
Sewage treatment plant		13.61 mg/L
Soil		2.89 mg/kg

#### 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

Do not recirculate outlet air that contain the substances.

The formation of vapours 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 eyewash and emergency showers are clearly marked.

Apply standard precautions during use of the product. Avoid inhalation of vapours.

##### Hygiene measures

Take off contaminated clothing and wash it before reuse.

##### 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 CE marked protective equipment.

##### Respiratory Equipment

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



#### Skin protection

Recommended	Type/Category	Standards
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 such as NIOSH (US) or EN 166(EU).	EN166



## SECTION 9: Physical and chemical properties

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

#### Physical state

Liquid

#### Colour

Green

#### Odour / Odour threshold

No data available.

#### pH

5.8

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

No data available.

#### Kinematic viscosity

No data available.

#### Particle characteristics

Does not apply to liquids.

#### Phase changes

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

No data available.

##### Softening point/range (°C)

Does not apply to liquids.

##### Boiling point (°C)

No data available.

##### Vapour pressure

No data available.

##### Relative vapour density

No data available.

##### Decomposition temperature (°C)

No data available.

#### Data on fire and explosion hazards

##### Flash point (°C)

No data available.

##### Flammability (°C)

No data available.

##### Auto-ignition temperature (°C)

No data available.

##### Lower and upper explosion limit (% v/v)

No data available.

#### Solubility

##### Solubility in water

No data available.

##### n-octanol/water coefficient (LogKow)

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

Do not expose to any forms of heat (e.g. solar radiation). May lead to excess pressure.

#### 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 hazard classes as defined in Regulation (EC) No 1272/2008

#### Acute toxicity

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

#### Skin corrosion/irritation

Causes skin irritation.

#### Serious eye damage/irritation

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

#### Respiratory sensitization

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

#### Skin sensitisation

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

#### Germ cell mutagenicity

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

#### Carcinogenicity

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

#### Reproductive toxicity

Suspected of damaging fertility or the unborn child.

#### STOT-single exposure

May cause drowsiness or dizziness.

#### STOT-repeated exposure

May cause damage to organs through prolonged or repeated exposure.

#### Aspiration hazard

May be fatal if swallowed and enters airways.

#### Symptoms related to the physical, chemical and toxicological characteristics

Reproductive toxicity: This product contains teratogenic substances, which may produce anomalies and/or developmental defects to the human offspring. Adverse effects include: death, growth retardation, congenital disorders, delayed mental development, and functional disorders. This product contains reprotoxic substances, which may harm the reproductive capacity. Adverse effects include: sterility, effects on the sexual function, lowered effective fertility and dysfunctional menstrual cycle.

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs.

Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

Neurotoxic effects: This product contains organic solvents, which may cause adverse effects to the nervous system.

Symptoms of neurotoxicity include: loss of appetite, headache, dizziness, ringing in ears, tingling sensations of skin, sensitivity to the cold, cramps, difficulty in concentrating, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

### 11.2. Information on other hazards

#### Endocrine disrupting properties

This mixture/product does not contain any substances known to have hormone-disrupting properties in relation to health.

#### Other information

toluene has been classified by IARC as a group 3.

## SECTION 12: Ecological information

### 12.1. Toxicity

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

### 12.2. Persistence and degradability

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

### 12.3. Bioaccumulative potential

Based on available data, 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. Endocrine disrupting properties

This mixture/product does not contain any substances considered to have endocrine-disrupting properties in relation to the environment.

#### 12.7. Other adverse effects

None known.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Product is covered by the regulations on hazardous waste.

HP 4 - Irritant (skin irritation and eye damage)

HP 5 - Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

HP 10 - Toxic for reproduction

Dispose of contents/container to an approved waste disposal plant.

Commission Regulation (EU) No 1357/2014 of 18 December 2014 on waste.




#### EWC code

Not applicable.

#### Contaminated packing

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

### SECTION 14: Transport information

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
ADR/A DN/RID	UN1294	TOLUENE	Transport hazard class: 3 Label: 3 Classification code: F1 	II	No	Limited quantities: 1 L Tunnel restriction code: (D/E) See below for additional information.
IMDG	UN1294	TOLUENE	Transport hazard class: 3 Label: 3 Classification code: F1 	II	No	Limited quantities: 1 L EmS: F-E S-D See below for additional information.
IATA	UN1294	TOLUENE	Transport hazard class: 3 Label: 3 Classification code: F1 	II	No	See below for additional information.

\* Packing group

\*\* Environmental hazards

#### Additional information

ADR/ADN/RID / See Table A, section 3.2.1 for any information on special provisions, requirements, or warnings in connection with transport. See section 5.4.3, 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. Maritime transport in bulk according to IMO instruments

No data available.

### SECTION 15: Regulatory information

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

##### Restrictions for application

Restricted to professional users.

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

Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

##### Demands for specific education

No specific requirements.

##### SEVESO - Categories / dangerous substances

Not applicable.

##### Regulation on drug precursors

toluene is included (Category 3)

##### REACH, Annex XVII

toluene is subject to REACH restrictions (entry 48).

toluene is subject to REACH restrictions (entry 40).

##### Additional information

Not applicable.

##### Sources

3 MAY 1999. - Royal decree on the protection of young people at work.

Labor Law of 24-01-1985, updated 31-12-2020.

Commission Regulation (EU) No 1357/2014 of 18 December 2014 on waste.

Council Regulation (EC) No 273/2004 on drug precursors.

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (CLP).

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

#### 15.2. Chemical safety assessment

No

### SECTION 16: Other information

#### Full text of H-phrases as mentioned in section 3

H225, Highly flammable liquid and vapour.

H304, May be fatal if swallowed and enters airways.

H315, Causes skin irritation.

H336, May cause drowsiness or dizziness.

H361, Suspected of damaging fertility or the unborn child.

H373, May cause damage to organs through prolonged or repeated exposure.

#### Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

CAS = Chemical Abstracts Service

CE = Conformité Européenne (European conformity)

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

CSA = Chemical Safety Assessment

CSR = Chemical Safety Report

DMEL = Derived Minimal Effect Level

DNEL = Derived No Effect Level  
EC = Effective concentration  
ED = Effective dose  
EINECS = European Inventory of Existing Commercial chemical Substances  
EL = Effective Loading  
ErC = Concentration associated with x% growth rate response  
ES = Exposure Scenario  
EUH statement = CLP-specific Hazard statement  
EuPCS = European Product Categorisation System  
EWC = European Waste Catalogue  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
GWP = Global warming potential  
HP = Hazardous Property code  
IARC = International Agency for Research on Cancer (IARC)  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IC = X maximum inhibitory concentration  
IMDG = International Maritime Dangerous Goods  
LC = Lethal concentration  
LCLo = Value is the lowest concentration of a material in air reported to have caused the death of animals or humans  
LD = Lethal dose  
LOAEC = Lowest Observed Adverse Effect Concentration  
LOAEL = Lowest Observed Adverse Effect Level  
LOEC = Lowest Observed Effect Concentration  
LogKow = logarithm of the n-octanol/water coefficient  
LL = Lethal Loading  
M = For multiplication factor  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
NOAEC = No Observed Adverse Effect Concentration  
NOAEL = No Observed Adverse Effect Level  
NOEC = No Observed Effect Concentration  
NOELR = No Observable Effect Loading Rate  
OECD = Organisation for Economic Co-operation and Development  
PBT = Persistent, Bioaccumulative and Toxic  
PNEC = Predicted No Effect Concentration  
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
RRN = REACH Registration Number  
SCL = A specific concentration limit  
SVHC = Substances of Very High Concern  
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure  
STOT-SE = Specific Target Organ Toxicity - Single Exposure  
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

#### Additional information

The classification of the mixture in regard of health hazards is in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP).

#### 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: BE-en