

SAFETY DATA SHEET

Acridine Orange, 10mg/mL in water (AO)

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

1.1. Product identifier

Trade name

Acridine Orange, 10mg/mL in water (AO)

Other names / Synonyms

40039: Acridine Orange, 10mg/mL in water (AO), 10 mL

Product no.

40039

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 users.

Use descriptors (REACH)

Sectors of use	Description
SU 24	Scientific research and development
Product category	Description
PC 21	Laboratory Chemicals
Process category	Description
PROC 15	Use as laboratory reagent

Uses advised against

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

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

Revision

26/12/2024

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

Muta. 1A; H340, May cause genetic defects.

2.2. Label elements

Hazard pictogram(s)



Signal word

Danger

Hazard statement(s)

May cause genetic defects. (H340)

Precautionary statement(s)

General

-

Prevention

Obtain special instructions before use. (P201)

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

Response

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

Storage

-

Disposal

Dispose of contents/container in accordance with local regulation (P501)

Hazardous substances

N,N,N',N'-tetramethylacridin-3,6-ylidiamine hydrochloride

Additional labelling

Restricted to professional users.

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
N,N,N',N'-tetramethylacridin-3,6-ylidiamine hydrochloride	CAS No.: 65-61-2 EC No.: 200-614-0 REACH: Index No.:	1%	Muta. 1A, H340	

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

Other information

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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

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 the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink.

In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.

Burns

Not applicable.

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

None known.

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

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.

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.

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

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

Refrigerator 2°C to 8°C.

Protect from light.

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 the Belgium list of substances with an occupational exposure limit.

DNEL

No data available.

PNEC

No data available.

8.2. Exposure controls

Apply general control to prevent unnecessary exposure

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

Occupational exposure limits have not been defined for the substances in this product.

Appropriate technical measures

Do not recirculate outlet air that contain the substances.

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

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 CE marked protective equipment.

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			



Material	Glove thickness (mm)	Breakthrough time (min.)	Standards
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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

No relevant or available data due to the nature of the product.

Odour / Odour threshold

No relevant or available data due to the nature of the product.

pH

No relevant or available data due to the nature of the product.

Density (g/cm³)

No relevant or available data due to the nature of the product.

Kinematic viscosity

No relevant or available data due to the nature of the product.

Particle characteristics

Does not apply to liquids.

Phase changes

Melting point/Freezing point (°C)

No relevant or available data due to the nature of the product.

Softening point/range (°C)

Does not apply to liquids.

Boiling point (°C)

No relevant or available data due to the nature of the product.

Vapour pressure

No relevant or available data due to the nature of the product.

Relative vapour density

No relevant or available data due to the nature of the product.

Decomposition temperature (°C)

No relevant or available data due to the nature of the product.

Data on fire and explosion hazards

Flash point (°C)

No relevant or available data due to the nature of the product.

Flammability (°C)

No relevant or available data due to the nature of the product.

Auto-ignition temperature (°C)

No relevant or available data due to the nature of the product.

Lower and upper explosion limit (% v/v)

No relevant or available data due to the nature of the product.

Solubility

Solubility in water

Soluble in water

n-octanol/water coefficient (LogKow)

No relevant or available data due to the nature of the product.

Solubility in fat (g/L)

No relevant or available data due to the nature of the product.

9.2. Other information

Other physical and chemical parameters

No data available.

Oxidizing properties

No relevant or available data due to the nature of the product.

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 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

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

Serious eye damage/irritation

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

Respiratory sensitisation

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

May cause genetic defects.

Carcinogenicity

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

Reproductive toxicity

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

STOT-single exposure

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

STOT-repeated exposure

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

Aspiration hazard

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

11.2. Information on other hazards

Long term effects

None known.

Endocrine disrupting properties

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

Other information

None known.

SECTION 12: Ecological information

12.1. Toxicity

No data available.

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 11 – Mutagenic

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	-	-	-	-	-	-
IMDG	-	-	-	-	-	-
IATA	-	-	-	-	-	-

* Packing group

** Environmental hazards

Additional information

Not dangerous goods according to ADR, IATA and IMDG.

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.

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.

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

H340, May cause genetic defects.

The full text of identified uses as mentioned in section 1

SU 24 = Scientific research and development

PROC 15 = Use as laboratory reagent

PC 21 = Laboratory Chemicals

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

EINECS = European Inventory of Existing Commercial chemical Substances

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

IARC = International Agency for Research on Cancer (IARC)

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

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)

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 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: BE-en