

SAFETY DATA SHEET

Acridine Orange, C.I. 46005

Version 2 · issued 12 October 2026

1. IDENTIFICATION**Product Identifiers**

Product Name Acridine Orange, C.I. 46005

Other Names Basic Orange 14, 3,6-Bis(dimethylamino)acridine HCl, 3,6-Bis(dimethylaminoacridinium chloride hemi(zin Basic Orange 14, 3,6-Bis(dimethylamino)acridine HCl, 3,6-Bis(dimethylaminoacridinium chloride hem

Product Number(s) C062

CAS Number 10127-02-3

Recommended use of the chemical and restriction on use
Laboratory use.

Company Details

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2. HAZARDS IDENTIFICATION**Classification of the substance or mixture**

Germ cell mutagenicity (Category 2)

Label Elements**Health hazard****Signal Words**

Warning

Hazard Statement(s)

H341: Suspected of causing genetic defects.

Precautionary Statement(s)

P201: obtain special instructions before use
P202: Do not handle until all safety precautions have been read and understood.
P281: Use personal protective equipment as required.
P405: Store locked up.
P308 ±P313: If exposed or concerned: contact doctor/physician.
P501: Dispose of contents/container to an approved waste disposal plant.

Primary route(s) of entry

possible routes separately, include inhalation, skin contact, eye contact and ingestion with initiation the easiest to happen

Human Health**Inhalation**

Harmful by inhalation.

Ingestion

Harmful if swallowed.

Eyes

Risk of serious damage to eyes.

Skin

Harmful in contact with skin.

Environment

No further relevant information available.

Other Hazards

Physician: Treat symptomatically and supportively.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Name	CAS No.	Content (w/w)	Classification
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Name	CAS No.	Content (w/w)	Classification
Acridine Orange	10127-02-3	90-100%	-
4. FIRST AID MEASURES			
Ingestion	Do not induce vomiting without medical advice.		
Inhalation	Move to fresh air. Consult a physician.		
Skin Contact	Rinse with plenty of water and seek medical advice.		
Eye Contact	Rinse immediately with plenty of water and seek medical advice.		
Other Information	Treat symptomatically and supportively.		
5. FIREFIGHTING MEASURES			
Suitable extinguishing equipment			
Fire	Use agent most appropriate to extinguish fire. Use water spray, dry chemical, carbon dioxide, or appropriate foam.		
HAZCHEM	Not available.		
Special protective equipment and precautions for fire fighters			
Nitrogen oxides, carbon oxides, hydrogen chloride gas, zinc/oxides. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.			
6. ACCIDENTAL RELEASE MEASURES			
Personal precautions, protective equipment and emergency procedures	Use proper PPE as indicated in Section 8.		
Environmental precautions	Not available.		
Methods and materials for containment and clean up	Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment Section. Avoid generating dusty conditions. Provide ventilation.		
7. HANDLING AND STORAGE			
Precautions for safe handling	Wash thoroughly after handling. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Use with adequate ventilation. Wash clothing before reuse.		
Conditions for safe storage	Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Store protected from moisture.		
8. EXPOSURE CONTROLS / PERSONAL PROTECTION			
Exposure Standards			
Engineering controls	Facilities storing or utilising this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.		
Personal protective equipment			
Eye and face protection	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard En166.		
Skin protection	Wear appropriate protective gloves to prevent skin exposure. Gloves 0.11mm thick.		
Body protection	Wear appropriate protective clothing to prevent skin exposure.		
Respiratory protection	A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.		
9. PHYSICAL AND CHEMICAL PROPERTIES			
General information			
Appearance	Orange solid.		
Odour	None reported.		
pH	Not available.		
Vapour Pressure	Not available.		
Density	Not available.		

Boiling Point	Not applicable.
Melting Point	Not available.
Solubility	Not available.
Specific Gravity of Density	Not available.
Flash Point	Not available.
Flammable (Explosive) Limits	Not available.
Ignition Temperature	Not available.
Formula	C17H19N3.HCl.0.5ZnCl2

10. STABILITY AND REACTIVITY

Reactivity	No further relevant information available.
Chemical stability	Stable at room temperature; closed containers normal storage and handling conditions.
Possibility of hazardous reactions	No further relevant information available.
Conditions to avoid	Moisture.
Incompatible materials	Strong Oxidizing agents.

11. TOXICOLOGICAL INFORMATION

Acute effects	No further relevant information available.
Eye contact	No further relevant information available.
Skin contact	No further relevant information available.
Ingestion	No further relevant information available.
Inhalation	No further relevant information available.
Chronic effects	Carcinogenicity: CAS# 10127-02-3: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
Toxicity and irritation	No further relevant information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity	No further relevant information available.
Persistence and degradability	No further relevant information available.
Bioaccumulative potential	No further relevant information available.
Other adverse effects	No further relevant information available.

13. DISPOSAL CONSIDERATIONS

General information

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classifications determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed. RCRA U-Series: None listed.

14. TRANSPORT INFORMATION

ADG label required	
HAZCHEM	Not available.
UN Number	None.
Proper shipping name	N,N',N''-Tetramethylacridine-3,6-diamine monohydrochloride with compound Zinc Dichloride.
Transport hazard class	0
Packing group	None.
Environmental hazard	No information available.
Special precautions for users	Not dangerous goods.
Additional information	Not dangerous goods.

15. REGULATORY INFORMATION

Poisons Schedule Number	None of the ingredients are listed.
Other Information	No further relevant information available.

16. OTHER INFORMATION

SDS preparation date	12 October 2026
Comments	This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
References	DUDLEY CHEMICALS LLC SDS "ACRIDINE ORANGE C.I. 46005" 1/01/2025 https://www.dudley-chem.com/msds/00909.rtf

This Safety Data Sheet (SDS) has been prepared in compliance with the Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice February 2016. It is the user's responsibility to determine the suitability of this information for adoption of necessary safety precautions. The information published in this SDS has been compiled from the publications listed in Section 16: to the best of our ability and knowledge these publications are considered accurate. We reserve the right to revise Safety Data Sheets as new information becomes available. Copies may be made for non-profit use.

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