

# SAFETY DATA SHEET

## Acridine Orange

According to the REACH etc. (Amendment etc.) (EU Exit) Regulations 2019 No. 758, as amended.

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

#### 1.1. Product identifier

**Product name** Acridine Orange  
**Product number** PL.8009, PL.8009/4, PL.8009/5

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

**Identified uses** Laboratory reagent.  
**Uses advised against** No specific uses advised against are identified.

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

**Supplier** Pro-Lab Diagnostics  
3 Bassendale Road  
Wirral  
Merseyside  
CH62 3QL  
Tel: 0151 353 1613  
Fax: 0151 353 1614  
mowen@pro-lab.com

#### 1.4. Emergency telephone number

**Emergency telephone** +44 (0)151 353 1613 Monday to Friday 9.00 to 17.00  
+44 (0)7714 429 646 outside the above hours

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (SI 2019 No. 720)

**Physical hazards** Not Classified  
**Health hazards** Not Classified  
**Environmental hazards** Not Classified

#### 2.2. Label elements

**Hazard statements** NC Not Classified  
**Supplemental label information** EUH210 Safety data sheet available on request.

#### 2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

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<b>acetic acid</b>	<b>1 - &lt;2.5%</b>
CAS number: 64-19-7	EC number: 200-580-7
<b>Classification</b>	
Flam. Liq. 3 - H226	
Skin Corr. 1A - H314	
Eye Dam. 1 - H318	

The full text for all hazard statements is displayed in Section 16.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

<b>Inhalation</b>	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.
<b>Ingestion</b>	Rinse mouth thoroughly with water. Give plenty of water to drink. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.
<b>Skin contact</b>	Wash skin thoroughly with soap and water.
<b>Eye contact</b>	Remove any contact lenses and open eyelids wide apart. Continue to rinse.

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

<b>Inhalation</b>	Irritation of nose, throat and airway.
<b>Ingestion</b>	May cause discomfort if swallowed.
<b>Skin contact</b>	Prolonged skin contact may cause redness and irritation.
<b>Eye contact</b>	May cause temporary eye irritation.

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

<b>Notes for the doctor</b>	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

<b>Suitable extinguishing media</b>	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.

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

<b>Hazardous combustion products</b>	Thermal decomposition or combustion products may include the following substances: Oxides of carbon. Toxic gases or vapours.
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#### 5.3. Advice for firefighters

<b>Special protective equipment for firefighters</b>	Use protective equipment appropriate for surrounding materials.
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### SECTION 6: Accidental release measures

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

<b>Personal precautions</b>	Wear protective clothing as described in Section 8 of this safety data sheet.
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#### 6.2. Environmental precautions

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**Environmental precautions** Avoid discharge into drains or watercourses or onto the ground.

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

**Methods for cleaning up** Absorb in vermiculite, dry sand or earth and place into containers. Containers with collected spillage must be properly labelled with correct contents and hazard symbol.

### 6.4. Reference to other sections

**Reference to other sections** See Section 11 for additional information on health hazards. For waste disposal, see Section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

**Usage precautions** Read and follow manufacturer's recommendations.

**Advice on general occupational hygiene** Avoid contact with eyes and prolonged skin contact.

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

**Storage precautions** Store in a cool and well-ventilated place.

### 7.3. Specific end use(s)

**Specific end use(s)** The identified uses for this product are detailed in Section 1.2.

## SECTION 8: Exposure controls/Personal protection

### 8.1. Control parameters

#### Occupational exposure limits

##### **acetic acid**

Long-term exposure limit (8-hour TWA): WEL 10 ppm 25 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 20 ppm 50 mg/m<sup>3</sup>

WEL = Workplace Exposure Limit.

#### acetic acid (CAS: 64-19-7)

<b>DNEL</b>	Workers - Inhalation; Long term local effects: 25 mg/m <sup>3</sup> Workers - Inhalation; Short term local effects: 25 mg/m <sup>3</sup> General population - Inhalation; Long term local effects: 25 mg/m <sup>3</sup> General population - Inhalation; Short term local effects: 25 mg/m <sup>3</sup>
<b>PNEC</b>	- Fresh water; 3.058 mg/l - marine water; 0.306 mg/l - STP; 85 mg/l - Sediment (Freshwater); 11.36 mg/kg - Sediment (Marinewater); 1.136 mg/kg - Soil; 0.47 mg/kg

### 8.2. Exposure controls

**Eye/face protection** No specific eye protection required during normal use.

**Hand protection** The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material.

**Hygiene measures** No specific hygiene procedures recommended but good personal hygiene practices should always be observed when working with chemical products.

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### SECTION 9: Physical and chemical properties

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

<b>Appearance</b>	Liquid.
<b>Colour</b>	Burnt orange
<b>Odour</b>	Almost odourless.
<b>Odour threshold</b>	Not determined.
<b>pH</b>	Not determined.
<b>Melting point</b>	Not relevant.
<b>Initial boiling point and range</b>	Not determined.
<b>Flash point</b>	Not determined.
<b>Evaporation rate</b>	Not determined.
<b>Evaporation factor</b>	Not determined.
<b>Flammability (solid, gas)</b>	Not relevant.
<b>Upper/lower flammability or explosive limits</b>	Not relevant.
<b>Vapour pressure</b>	Not determined.
<b>Vapour density</b>	Not determined.
<b>Relative density</b>	Not determined.
<b>Bulk density</b>	Not determined.
<b>Solubility(ies)</b>	Soluble in water.
<b>Partition coefficient</b>	Not determined.
<b>Auto-ignition temperature</b>	Not relevant.
<b>Decomposition Temperature</b>	Not relevant.
<b>Viscosity</b>	Not determined.
<b>Explosive properties</b>	Not considered to be explosive.
<b>Oxidising properties</b>	The mixture itself has not been tested but none of the ingredient substances meet the criteria for classification as oxidising.

#### 9.2. Other information

<b>Other information</b>	No information required.
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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

<b>Reactivity</b>	There are no known reactivity hazards associated with this product.
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#### 10.2. Chemical stability

<b>Stability</b>	Stable at normal ambient temperatures and when used as recommended.
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#### 10.3. Possibility of hazardous reactions

<b>Possibility of hazardous reactions</b>	Will not polymerise.
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## Acridine Orange

### 10.4. Conditions to avoid

**Conditions to avoid** Avoid excessive heat for prolonged periods of time.

### 10.5. Incompatible materials

**Materials to avoid** No specific material or group of materials is likely to react with the product to produce a hazardous situation.

### 10.6. Hazardous decomposition products

**Hazardous decomposition products** None at ambient temperatures. Thermal decomposition or combustion products may include the following substances: Oxides of carbon. Oxides of nitrogen.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity - oral

**Notes (oral LD<sub>50</sub>)** Based on available data the classification criteria are not met.

#### Acute toxicity - dermal

**Notes (dermal LD<sub>50</sub>)** Based on available data the classification criteria are not met.

#### Acute toxicity - inhalation

**Notes (inhalation LC<sub>50</sub>)** Based on available data the classification criteria are not met.

#### Skin corrosion/irritation

**Animal data** Based on available data the classification criteria are not met.

#### Serious eye damage/irritation

**Serious eye damage/irritation** Based on available data the classification criteria are not met.

#### Respiratory sensitisation

**Respiratory sensitisation** Based on available data the classification criteria are not met.

#### Skin sensitisation

**Skin sensitisation** Based on available data the classification criteria are not met.

#### Germ cell mutagenicity

**Genotoxicity - in vitro** Based on available data the classification criteria are not met.

**Genotoxicity - in vivo** Based on available data the classification criteria are not met.

#### Carcinogenicity

**Carcinogenicity** Based on available data the classification criteria are not met.

#### Reproductive toxicity

**Reproductive toxicity - fertility** Based on available data the classification criteria are not met.

#### Specific target organ toxicity - single exposure

**STOT - single exposure** Based on available data the classification criteria are not met.

#### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** Based on available data the classification criteria are not met.

#### Aspiration hazard

**Aspiration hazard** Not anticipated to present an aspiration hazard, based on chemical structure.

#### Toxicological information on ingredients.

acetic acid

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### Skin corrosion/irritation

**Animal data** Dose: 0.5 ml (3.3 - 10%), 4 hours, Rabbit Primary dermal irritation index: 0.5 - 1.1 REACH dossier information. Skin Corr. 1A - H314 Causes severe skin burns and eye damage.

### Serious eye damage/irritation

**Serious eye damage/irritation** Dose: 0.1 ml, 30 seconds, Rabbit REACH dossier information. Eye Dam. 1 - H318 Causes serious eye damage.

### Germ cell mutagenicity

**Genotoxicity - in vitro** Chromosome aberration: Negative. REACH dossier information.

### Reproductive toxicity

**Reproductive toxicity - development** Developmental toxicity: - NOAEL: 1600 mg/kg/day, Oral, Rat REACH dossier information.

## SECTION 12: Ecological information

### 12.1. Toxicity

**Toxicity** Not considered toxic to fish.

### Ecological information on ingredients.

#### acetic acid

### Acute aquatic toxicity

**Acute toxicity - fish** NOEC, 96 hours: 1000 mg/l, Oncorhynchus mykiss (Rainbow trout)  
LC<sub>50</sub>, 96 hours: > 1000 mg/l, Oncorhynchus mykiss (Rainbow trout)  
REACH dossier information.

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 48 hours: > 1000 mg/l, Daphnia magna  
REACH dossier information.

**Acute toxicity - aquatic plants** EC<sub>50</sub>, 24 hours: 0.08 mg/l, Anabaena flos-aquae  
EC<sub>20</sub>, 24 hours: 2.84 mg/l, Anabaena flos-aquae  
EC<sub>10</sub>, 24 hours: 9.19 mg/l, Anabaena flos-aquae  
EC<sub>50</sub>, 48 hours: 82.07 mg/l, Anabaena flos-aquae  
EC<sub>20</sub>, 48 hours: 31.2 mg/l, Anabaena flos-aquae  
EC<sub>10</sub>, 48 hours: 22.6 mg/l, Anabaena flos-aquae  
EC<sub>50</sub>, 72 hours: 55.22 mg/l, Anabaena flos-aquae  
EC<sub>20</sub>, 72 hours: 21.98 mg/l, Anabaena flos-aquae  
EC<sub>10</sub>, 72 hours: 16.16 mg/l, Anabaena flos-aquae  
REACH dossier information.

### 12.2. Persistence and degradability

**Persistence and degradability** No data available.

### Ecological information on ingredients.

#### acetic acid

**Phototransformation** Water - DT<sub>50</sub> : 26.7 days  
Calculation method.  
REACH dossier information.

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**Biodegradation** Water - Half-life : 2 days  
Water - Degradation (96%): 20 days  
REACH dossier information.  
The substance is readily biodegradable.

### 12.3. Bioaccumulative potential

**Bioaccumulative potential** No data available on bioaccumulation.

**Partition coefficient** Not determined.

### Ecological information on ingredients.

#### acetic acid

**Bioaccumulative potential** BCF: 3.16, Fish QSAR model REACH dossier information.

**Partition coefficient** log Pow: -0.17 REACH dossier information.

### 12.4. Mobility in soil

**Mobility** The product is soluble in water.

### Ecological information on ingredients.

#### acetic acid

**Henry's law constant** 0.21 Pa m<sup>3</sup>/mol @ 25°C Calculation method. REACH dossier information.

### 12.5. Results of PBT and vPvB assessment

**Results of PBT and vPvB assessment** This product does not contain any substances classified as PBT or vPvB.

### Ecological information on ingredients.

#### acetic acid

**Results of PBT and vPvB assessment** This substance is not classified as PBT or vPvB according to current UK criteria.

### 12.6. Other adverse effects

**Other adverse effects** Not determined.

## **SECTION 13: Disposal considerations**

### 13.1. Waste treatment methods

**General information** Dispose of waste product or used containers in accordance with local regulations

## **SECTION 14: Transport information**

**General** The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

### 14.1. UN number

Not applicable.

### 14.2. UN proper shipping name

Not applicable.

### 14.3. Transport hazard class(es)

No transport warning sign required.

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### 14.4. Packing group

Not applicable.

### 14.5. Environmental hazards

#### Environmentally hazardous substance/marine pollutant

No.

### 14.6. Special precautions for user

Not applicable.

### 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Not applicable.

Annex II of MARPOL 73/78  
and the IBC Code

## SECTION 15: Regulatory information

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

**National regulations** EH40/2005 Workplace exposure limits.  
The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019 No. 758, as amended.  
The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2019 No. 720, as amended.

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

## SECTION 16: Other information

**Abbreviations and acronyms used in the safety data sheet** LC50: Lethal Concentration to 50 % of a test population.  
BCF: Bioconcentration Factor.  
EC<sub>50</sub>: 50% of maximal Effective Concentration.  
NOAEL: No Observed Adverse Effect Level.  
NOEC: No Observed Effect Concentration.

**Classification abbreviations and acronyms** Eye Dam. = Serious eye damage  
Flam. Liq. = Flammable liquid  
Skin Corr. = Skin corrosion

**Classification procedures according to SI 2019 No. 720** Not classified.: Calculation method.

**Revision comments** Revised regulations.

**Revision date** 26/09/2022

**Revision** 6

**Supersedes date** 01/10/2017

**SDS number** 763

**Hazard statements in full** H226 Flammable liquid and vapour.  
H314 Causes severe skin burns and eye damage.  
H318 Causes serious eye damage.

The information in this safety data sheet was obtained from current and reliable sources. However, the data is provided without warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions for use, handling, storage and disposal of this product are beyond Pro-Lab Diagnostics control, it is the users responsibility to perform thorough testing of this product when used in combination with any other product. It is suggested that users familiarise themselves with this safety data sheet before handling the product.