SAFETY DATA SHEET  
Acridine Orange  

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

Classification (67/548/EEC or 1999/45/EC)  
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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
Acridine Orange

Acetic acid

CAS number: 64-19-7
EC number: 200-580-7

Classification
Flam. Liq. 3 - H226
Skin Corr. 1A - H314
Eye Dam. 1 - H318

Classification (67/548/EEC or 1999/45/EC)
C; R35. R10

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation
Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing.

Ingestion
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.

Skin contact
Wash skin thoroughly with soap and water.

Eye contact
Remove any contact lenses and open eyelids wide apart. Continue to rinse.

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

Inhalation
Irritation of nose, throat and airway.

Ingestion
May cause discomfort if swallowed.

Skin contact
Prolonged skin contact may cause redness and irritation.

Eye contact
May cause temporary eye irritation.

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

Notes for the doctor
The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media
Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products
Thermal decomposition or combustion products may include the following substances: Oxides of carbon. Toxic gases or vapours.

5.3. Advice for firefighters

Special protective equipment for firefighters
Use protective equipment appropriate for surrounding materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions
Wear protective clothing as described in Section 8 of this safety data sheet.
Acridine Orange

6.2. Environmental precautions
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
Ingredient comments
No exposure limits known for ingredient(s).

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.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties
Appearance
Liquid.
Colour
Burnt orange
Odour
Almost odourless.
Odour threshold
Not determined.
pH
Not determined.
Melting point
Not relevant.
Initial boiling point and range
Not determined.
Flash point
Not determined.
Evaporation rate
Not determined.
**Acridine Orange**

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaporation factor</td>
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</tr>
<tr>
<td>Flammability (solid, gas)</td>
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<tr>
<td>Upper/lower flammability or explosive limits</td>
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<tr>
<td>Vapour pressure</td>
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<tr>
<td>Vapour density</td>
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<td>Relative density</td>
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<tr>
<td>Bulk density</td>
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<tr>
<td>Solubility(ies)</td>
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<tr>
<td>Partition coefficient</td>
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<tr>
<td>Auto-ignition temperature</td>
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</tr>
<tr>
<td>Decomposition Temperature</td>
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<tr>
<td>Viscosity</td>
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</tr>
<tr>
<td>Explosive properties</td>
<td>Not considered to be explosive.</td>
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<tr>
<td>Oxidising properties</td>
<td>The mixture itself has not been tested but none of the ingredient substances meet the criteria for classification as oxidising.</td>
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</table>

### 9.2. Other information

Other information: No information required.

### SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity: There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability: Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions: Will not polymerise.

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 LD₅₀): Based on available data the classification criteria are not met.
Acridine Orange

**Acute toxicity - dermal**
Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

**Acute toxicity - inhalation**
Notes (inhalation LC₅₀) 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**
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**
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**

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.
Acridine Orange

SECTION 12: Ecological Information

12.1. Toxicity

Toxicity  Not considered toxic to fish.

Ecological information on ingredients.

Acetic acid

Acute toxicity - fish  NOEC, 96 hours: 1000 mg/l, Onchorhynchus mykiss (Rainbow trout)
LC₅₀, 96 hours: > 1000 mg/l, Onchorhynchus mykiss (Rainbow trout)
REACH dossier information.

Acute toxicity - aquatic invertebrates  EC₅₀, 48 hours: > 1000 mg/l, Daphnia magna
REACH dossier information.

Acute toxicity - aquatic plants  EC₅₀, 24 hours: 0.08 mg/l, Anabaena flos-aquae
EC₂₀, 24 hours: 2.84 mg/l, Anabaena flos-aquae
EC₁₀, 24 hours: 9.19 mg/l, Anabaena flos-aquae
EC₅₀, 48 hours: 82.07 mg/l, Anabaena flos-aquae
EC₂₀, 48 hours: 31.2 mg/l, Anabaena flos-aquae
EC₁₀, 48 hours: 22.6 mg/l, Anabaena flos-aquae
EC₅₀, 72 hours: 55.22 mg/l, Anabaena flos-aquae
EC₂₀, 72 hours: 31.2 mg/l, Anabaena flos-aquae
EC₁₀, 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  Air - DT₅₀ : 26.7 days
Calculation method.
REACH dossier information.

Biodegradation  Soil - 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.
Acridine Orange

Ecological information on ingredients.

**Acetic acid**

Henry's law constant 0.21 Pa m³/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.

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.

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 MARPOL73/78 and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

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.
Acridine Orange

**EU legislation**

**15.2. Chemical safety assessment**
No chemical safety assessment has been carried out.

### SECTION 16: Other information

<table>
<thead>
<tr>
<th>Classification procedures according to Regulation (EC) 1272/2008</th>
<th>Not classified.: Calculation method.</th>
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<tr>
<td>Revision date</td>
<td>09/04/2015</td>
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<td>Revision</td>
<td>4</td>
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<tr>
<td>Supersedes date</td>
<td>01/11/2012</td>
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<tr>
<td>SDS number</td>
<td>763</td>
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</tbody>
</table>
| Risk phrases in full | R10 Flammable.  
R35 Causes severe burns. |
| 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.