SAFETY DATA SHEET
Safranin

According to Regulation (EC) No 1907/2006, Annex II, as amended by Regulation (EU) No 453/2010

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

1.1. Product identifier

Product name Safranin

Product number PL.7012,PL.7012/25,PL.7012/100,PL.7013,PL.7014

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 Flam. Liq. 3 - H226

Health hazards Not Classified

Environmental hazards Not Classified

Classification (67/548/EEC or 1999/45/EC) R10

2.2. Label elements

Pictogram

Signal word Warning

Hazard statements H226 Flammable liquid and vapour.

Safranin

Precautionary statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with national regulations.

Supplementary precautionary statements

P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.

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

Ethanol **10 - <25%**

CAS number: 64-17-5 EC number: 200-578-6

Substance with National workplace exposure limits.

Classification	Classification (67/548/EEC or 1999/45/EC)
Flam. Liq. 2 - H225	F; R11

Methanol **1 - <2.5%**

CAS number: 67-56-1 EC number: 200-659-6 REACH registration number: 01-2119433307-44-XXXX

Classification	Classification (67/548/EEC or 1999/45/EC)
Flam. Liq. 2 - H225 Acute Tox. 3 - H301 Acute Tox. 3 - H311 Acute Tox. 3 - H331 STOT SE 1 - H370	F; R11. T; R23/24/25, R39/23/24/25

Glycerol **1 - <2.5%**

CAS number: 56-81-5 EC number: 200-289-5

Substance with National workplace exposure limits.

Classification	Classification (67/548/EEC or 1999/45/EC)
Not Classified	---

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

General information Keep affected person away from heat, sparks and flames.

Inhalation Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if symptoms are severe or persist.

Safranin

Ingestion Rinse mouth thoroughly with water. Do not induce vomiting unless under the direction of medical personnel. If in doubt, get medical attention promptly.

Skin contact Rinse cautiously with water for several minutes. Remove contaminated clothing. Wash contaminated clothing before reuse.

Eye contact Remove contact lenses, if present and easy to do. Continue rinsing. Rinse immediately with plenty of water. Get medical attention if symptoms are severe or persist after washing.

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

Inhalation If large concentrations are inhaled: Dizziness. Drowsiness.

Ingestion May cause discomfort if swallowed.

Skin contact Causes mild skin irritation. Prolonged contact may cause redness, irritation and dry skin.

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.

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

Specific hazards Flammable liquid and vapour. Vapours may be ignited by a spark, a hot surface or an ember.

5.3. Advice for firefighters

Protective actions during firefighting Fight fire from safe distance or protected location. Use water spray to reduce vapours. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak.

Special protective equipment for firefighters Use air-supplied respirator, gloves and protective goggles. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Use protective equipment appropriate for surrounding materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Follow precautions for safe handling described in this safety data sheet. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation.

6.2. Environmental precautions

Environmental precautions Avoid the spillage or runoff entering drains, sewers or watercourses.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Take care as floors and other surfaces may become slippery. Contain spillage with sand, earth or other suitable non-combustible material. Absorb in vermiculite, dry sand or earth and place into containers. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

6.4. Reference to other sections

Safranin

Reference to other sections For personal protection, see Section 8. For waste disposal, see Section 13. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid breathing vapours. Avoid contact with eyes and prolonged skin contact. Avoid the formation of mists. Ground/bond container and receiving equipment.

Advice on general occupational hygiene Do not eat, drink or smoke when using this product. Eye wash facilities and emergency shower must be available when handling this product. Good personal hygiene procedures should be implemented. Take off contaminated clothing and wash it before reuse. Wash promptly with soap and water if skin becomes contaminated.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep at temperature not exceeding 20°C.

Storage class Flammable liquid storage.

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

Ethanol

Long-term exposure limit (8-hour TWA): WEL 1000 ppm 1920 mg/m³

Methanol

Long-term exposure limit (8-hour TWA): WEL 200 ppm 266 mg/m³
Short-term exposure limit (15-minute): WEL 250 ppm 333 mg/m³
Sk

Glycerol

Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ mist

WEL = Workplace Exposure Limit
Sk = Can be absorbed through the skin.

8.2. Exposure controls

Appropriate engineering controls Avoid inhalation of vapours and spray/mists. Good general ventilation should be adequate to control worker exposure to airborne contaminants. In case of insufficient ventilation, wear suitable respiratory equipment.

Eye/face protection Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles.

Hand protection Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. 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. Frequent changes are recommended. The breakthrough time for any glove material may be different for different glove manufacturers.

Other skin and body protection Wear anti-static protective clothing if there is a risk of ignition from static electricity.

Safranin

Hygiene measures	Do not eat, drink or smoke when using this product. Eye wash facilities and emergency shower must be available when handling this product. Good personal hygiene procedures should be implemented.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Dark. Red.
Odour	Alcoholic.
pH	Not relevant.
Melting point	Not relevant.
Initial boiling point and range	78 - 100°C @ 1013 hPa
Flash point	~ 47°C
Evaporation rate	Not determined.
Flammability (solid, gas)	Not determined.
Upper/lower flammability or explosive limits	Not determined.
Vapour pressure	Not determined.
Vapour density	Not relevant.
Relative density	Not determined.
Solubility(ies)	Soluble in water.
Partition coefficient	Not determined.
Auto-ignition temperature	Not determined.
Decomposition Temperature	Not determined.
Viscosity	Not determined.
Explosive properties	Not considered to be explosive.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Other information	None.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	No test data specifically related to reactivity available for this product or its ingredients.

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	Acids. Alkalis. Oxidising agents.

10.4. Conditions to avoid

Safranin

Conditions to avoid Avoid heat, flames and other sources of ignition.

10.5. Incompatible materials

Materials to avoid Acids. Alkalis. Oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition or combustion products may include the following substances: Carbon dioxide (CO2). Carbon monoxide (CO). Nitrous gases (NOx). Hydrocarbons. Does not decompose when used and stored as recommended.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Notes (oral LD_{50}) Based on available data the classification criteria are not met.

ATE oral (mg/kg) 22,080.90443385

Acute toxicity - dermal

Notes (dermal LD_{50}) Based on available data the classification criteria are not met.

ATE dermal (mg/kg) 22,080.90443385

Acute toxicity - inhalation

Notes (inhalation LC_{50}) Based on available data the classification criteria are not met.

ATE inhalation (gases ppm) 51,522.11034564

ATE inhalation (vapours mg/l) 220.80904434

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.

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.

Safranin

Toxicological information on ingredients.

Ethanol

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	10,470.0
Species	Rat
Notes (oral LD_{50})	REACH dossier information. Based on available data the classification criteria are not met.
ATE oral (mg/kg)	10,470.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC_{50} vapours mg/l)	124.7
Species	Rat
Notes (inhalation LC_{50})	REACH dossier information. Based on available data the classification criteria are not met.
ATE inhalation (vapours mg/l)	124.7

Skin corrosion/irritation

Animal data	Dose: 0.2 ml, 24 hours, Rabbit Primary dermal irritation index: 0 / 8 REACH dossier information. Not irritating.

Skin sensitisation

Skin sensitisation	Guinea pig maximization test (GPMT) - Mouse: Not sensitising. REACH dossier information. Read across data. Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro	Gene mutation: Negative. REACH dossier information. Based on available data the classification criteria are not met.
Genotoxicity - in vivo	Chromosome aberration: Negative. REACH dossier information. Based on available data the classification criteria are not met.

Carcinogenicity

IARC carcinogenicity	IARC Group 1 Carcinogenic to humans.

Reproductive toxicity

Reproductive toxicity - fertility	Two-generation study - NOAEL 15 %, Oral, Mouse P REACH dossier information.
Reproductive toxicity - development	Maternal toxicity: - NOAEL: 16000 ppm, Inhalation, Rat REACH dossier information.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	LOAEL 4 mL/Kg, Oral, Rat REACH dossier information. Based on available data the classification criteria are not met.

Safranin

Methanol

Acute toxicity - oral

Notes (oral LD_{50})	International Programme on Chemical Safety (IPCS) (1997) Environmental Health Criteria 196: Methanol. Geneva, World Health Organization. Toxic if swallowed.
ATE oral (mg/kg)	300.0

Acute toxicity - dermal

Notes (dermal LD_{50})	Converted acute toxicity point estimate (cATpE) Toxic in contact with skin.
ATE dermal (mg/kg)	300

Acute toxicity - inhalation

Notes (inhalation LC_{50})	Converted acute toxicity point estimate (cATpE) Toxic if inhaled.
ATE inhalation (gases ppm)	700.0
ATE inhalation (vapours mg/l)	3.0

Skin corrosion/irritation

Animal data	Dose: 2.5cm x 2.5cm, 20 hours, Rabbit Erythema/eschar score: No erythema (0). Oedema score: No oedema (0). REACH dossier information. Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation	Dose: 0.05 ml, 24 hours, Rabbit REACH dossier information. Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation	Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising. REACH dossier information. Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure	STOT SE 1 - H370
Target organs	Eyes Central nervous system

SECTION 12: Ecological Information

12.1. Toxicity

Toxicity	Based on available data the classification criteria are not met. However, large or frequent spills may have hazardous effects on the environment.

Ecological information on ingredients.

Ethanol

Acute toxicity - fish	LC_{50}, 96 hours: 14200 mg/l, Pimephales promelas (Fat-head Minnow) REACH dossier information.
Acute toxicity - aquatic invertebrates	LC_{50}, 48 hours: 5012 mg/l, Ceriodaphnia dubia REACH dossier information.

Safranin

Acute toxicity - aquatic plants	EC_{50}, 72 hours: 11.5 mg/l, Chlorella vulgaris REACH dossier information.
Chronic toxicity - aquatic invertebrates	NOEC, 9 days: 9.6 mg/l, Daphnia magna REACH dossier information.

Methanol

Acute toxicity - fish	LC_{50}, 96 hours: 15400 mg/l, Lepomis macrochirus (Bluegill) EC_{50}, 96 hours: 12700 mg/l, Lepomis macrochirus (Bluegill) REACH dossier information.
Acute toxicity - aquatic invertebrates	EC_{50}, 96 hours: 18260 mg/l, Daphnia magna REACH dossier information.
Acute toxicity - aquatic plants	EC_{50}, 96 hours: ~ 22000 mg/l, Pseudokirchneriella subcapitata REACH dossier information.
Acute toxicity - microorganisms	IC_{50}, 3 hours: >1000 mg/l, Activated sludge REACH dossier information.

12.2. Persistence and degradability

Persistence and degradability There are no data on the degradability of this product. Volatile substances are degraded in the atmosphere within a few days.

Ecological information on ingredients.

Ethanol

Biodegradation	Water - Degradation (74%): 10 days REACH dossier information. The substance is readily biodegradable.
Chemical oxygen demand	1.99 g O_2/g substance REACH dossier information.

Methanol

Phototransformation	Air - DT_{50} : 17.2 days REACH dossier information.
Biodegradation	Water - Degradation (95%): 20 days Water - Degradation (91%): 15 days Water - Degradation (88%): 10 days Water - Degradation (76%): 5 days REACH dossier information. The substance is readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential Not determined.

Partition coefficient Not determined.

Ecological information on ingredients.

Ethanol

Partition coefficient	log Pow: - 0.35 REACH dossier information.

Safranin

Methanol

Partition coefficient log Pow: -0.77 REACH dossier information.

12.4. Mobility in soil

Mobility The product contains organic solvents which will evaporate easily from all surfaces. The product contains substances which are water-soluble and may spread in water systems.

Ecological information on ingredients.

Ethanol

Surface tension 24.5 mN/m @ 20°C/68°F REACH dossier information.

Methanol

Mobility Mobile.

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 relevant.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Reuse or recycle products wherever possible. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

Disposal methods Absorb in vermiculite, dry sand or earth and place into containers. Place waste in labelled, sealed containers. Dispose of contents/container in accordance with national regulations.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID) 1993

UN No. (IMDG) 1993

UN No. (ICAO) 1993

UN No. (ADN) 1993

14.2. UN proper shipping name

Proper shipping name (ADR/RID) FLAMMABLE LIQUID, N.O.S. (ethanol)

Proper shipping name (IMDG) FLAMMABLE LIQUID, N.O.S. (ethanol)

Proper shipping name (ICAO) FLAMMABLE LIQUID, N.O.S. (ethanol)

Proper shipping name (ADN) FLAMMABLE LIQUID, N.O.S. (ethanol)

14.3. Transport hazard class(es)

Safranin

ADR/RID class	3
ADR/RID classification code	F1
ADR/RID label	3
IMDG class	3
ICAO class/division	3
ADN class	3

Transport labels

14.4. Packing group

ADR/RID packing group	III
IMDG packing group	III
ADN packing group	III
ICAO packing group	III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

EmS	F-E, S-E
ADR transport category	3
Emergency Action Code	•3Y
Hazard Identification Number (ADR/RID)	30
Tunnel restriction code	(D/E)

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 relevant.

SECTION 15: Regulatory information

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

National regulations	The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716). EH40/2005 Workplace exposure limits.

Safranin

EU legislation	Council Directive of 20 May 1975 on the approximation of the laws of the Member States relating to aerosol dispensers (75/324/EEC). 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 (as amended). 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) (as amended).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Classification procedures according to Regulation (EC) 1272/2008	Flam. Liq. 3 - H226: Expert judgement.
Revision comments	Classification according to EC 1272/2008 (CLP).
Revision date	09/04/2015
Revision	6
Supersedes date	01/03/2013
SDS number	823
Risk phrases in full	R10 Flammable. R11 Highly flammable. R23/24/25 Toxic by inhalation, in contact with skin and if swallowed. R39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
Hazard statements in full	H225 Highly flammable liquid and vapour. H226 Flammable liquid and vapour. H301 Toxic if swallowed. H311 Toxic in contact with skin. H331 Toxic if inhaled. H370 Causes damage to organs (Eyes, Central nervous system).

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.