

# ZONE IMAGING

**Zone Imaging Ltd.**

**Safety Data Sheet**

**510 Pyro Film Developer**

According to Regulation (EC) No 1907/2006, Annex II, as amended.

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

### **1.1. Product identifier**

**Product name** 510 Pyro  
**Container size** 100ml, 500ml

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

**Identified uses** Photographic Developer Solution  
**Other uses** None

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

**Supplier** Zone Imaging Ltd., Unit 6, 58b Alexandra Road, Enfield, London, EN3 7EH, UK  
**Tel** +4477 6099 6515  
**Email** [james.lane@zoneimaginglab.co.uk](mailto:james.lane@zoneimaginglab.co.uk)  
**Emergency tel** +4477 6099 6515  
**Toll free number (US)** 877 817 4320

## **SECTION 2: Hazards identification**

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

**Product definition:** Mixture

**Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Acute toxicity 4: H302

Acute toxicity 4: H312

Acute toxicity 4: H332

Skin Irritant 2: H315

Skin Sensitiser 1: H317

Eye Damage 2: H319

Mutagen 2: H341

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the hazard statements declared above.

## 2.2. Label elements

### Pictograms



### Signal word

Warning

### Hazard statements

**H302** – Harmful if swallowed. Acute tox. 4

**H312** – Harmful if in contact with skin. Acute tox. 4

**H332** – Harmful if inhaled. Acute tox. 4

**H315** – Causes skin irritation. Skin irritation 2

**H317** – May cause an allergic skin reaction. Skin sens. 1

**H319** – Causes serious eye irritation. Eye dam. 2

**H341** – Suspected of causing genetic defects. Muta. 2

### Precautionary statements

#### General

Not Applicable

#### Prevention

**P201:** Obtain special instructions before use.

**P202:** Do not handle until all safety precautions have been read and understood.

**P261:** Avoid breathing dust/fume/gas/mist/vapours/spray.

**P264:** Wash hands and equipment thoroughly after handling.

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Valid from 24/06/2022

**P270:** Do not eat/drink/smoke when using this product.

**P271:** Use outdoors or in a well-ventilated area.

**P272:** Contaminated work clothing should not be allowed out of the workplace.

**P280:** Wear protective gloves/protective clothing/eye protection/face protection.

**P312:** Call a POISON CENTER or doctor/physician if you feel unwell.

## Response

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

**P333+P313** If skin irritation or rash occurs: Get medical advice/attention.

**P337+P313** If eye irritation persists: Get medical advice/attention.

**P302+P352** IF ON SKIN: Wash with plenty of water

**P304+P340** IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

**P305+P351+P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**P362** Take off contaminated clothing and wash it before reuse.

## Storage

**P405** Store locked up.

## Disposal

**P501** Dispose of contents/container in accordance with local regulations.

## Hazardous ingredients

Pyrogallol

1-phenyl-3-pyrazolidone (Phenidone A)

**Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

N/A

## 2.3. Other Hazards

**Other hazards which do not result in classification**

None

**SECTION 3: Composition/information on ingredients****3.1. Mixture of the substances listed below with harmless additions**

Substance name	Identifiers	% w/w	Hazards	Type
Triethanolamine	CAS# 102-71-6 EC# 203-049-8 REACH# 01-2119486482-31	80 - 100	Not classified	2
Pyrogallol	CAS# 87-66-1 EC# 201-762-9 REACH# 01-2120771401-62	10 - 15	Acute Tox 4 H302 Acute Tox 4 H312 Skin Irrit 2 H315 Skin Sens 1 H317 Eye Dam 2 H318 Acute Tox 4 H332 Muta 2 H341 Aq Tox Chr 3 H412	1
L-Ascorbic Acid	CAS# 50-81-7 EC# 200-066-2	5 - 10	Not classified	2
1-phenyl-3-pyrazolidone (Phenidone A)	CAS# 92-43-3 EC# 202-155-1 REACH# 01-212011875-53	0.1 - 0.5	Acute Tox. 4 H302 Aquatic Chronic 2 H411	1

Type: 1. Hazardous Substance

2. Substance with a workplace exposure limit

**SECTION 4: First aid measures****4.1. Description of first aid measures****General information**

Instantly remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore, ensure medical observation for at least 24 hours after the accident.

**Inhalation**

Loosen clothing as necessary and position individual in a comfortable position exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Get medical assistance if cough or other symptoms appear.

**Ingestion**

Remove victim immediately from source of exposure. Rinse mouth thoroughly. Drink a few glasses of water. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn't enter the lungs. Get medical attention.

- Skin contact** Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Contact physician if irritation continues.
- Eye contact** Remove affected person from source of contamination. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing.

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

Headache. Nausea. Shortness to breath. Irritating to eyes. May cause skin and respiratory irritation. May cause an allergic skin reaction. May cause gastrointestinal irritation, vomiting and diarrhoea. May cause adverse liver and kidney effects.

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

**Notes for the doctor** Provide SDS document. Doctor should treat symptomatically.

### **SECTION 5: Firefighting measures**

#### 5.1. Extinguishing media

**Suitable extinguishing media** Carbon dioxide, dry chemical powder, water spray.

**Unsuitable extinguishing media** Not available

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

**Specific risks** None, this product is non-flammable nor explosive.

**Hazardous combustion products** Thermal decomposition or combustion products may include carbon and nitrogen oxides and other toxic vapours.

#### 5.3. Advice for firefighters

**Protective actions during firefighting** Avoid breathing fire gases or vapours.

**Special protective equipment** Wear protective eyewear, gloves and clothing. Use NIOSH approved respiratory protection/breathing apparatus.

### **SECTION 6: Accidental release measures**

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

**Personal precautions** Avoid contact with skin and eyes. Provide adequate ventilation. For personal protection, see Section 8.

#### 6.2. Environmental precautions

**Environmental precautions** Inform respective authorities in case product reaches water or sewage system. Do not discharge into drains or watercourses or onto the ground. Collect and dispose of spillage as indicated in Section 13.

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

**Methods for cleaning up** Wear protective clothing, gloves, eye and face protection.  
Small Spillages: Flush away spillage with plenty of water.  
Large Spillages: Absorb in vermiculite, dry sand or earth and place into containers. Flush contaminated area with plenty of water. Avoid the spillage or runoff entering drains, sewers or watercourses.

## **SECTION 7: Handling and storage**

### 7.1. Precautions for safe handling

**Usage precautions** Provide adequate ventilation. Avoid spilling. Avoid contact with skin and eyes. Do not eat, drink, or smoke when using this product. Read and follow manufacturer's recommendations.

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

**Storage precautions** Store in tightly-closed, original container away from light and somewhere dry. Storage advice to ensure the product remains in a useable condition throughout its specified shelf life: Store at temperatures above 10°C. Store at temperatures not exceeding 30°C.

**Storage class** Chemical 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

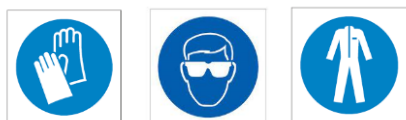
**TRIETHANOLAMINE**

CAS# 102-71-6

Long-term exposure limit (8-hour TWA): WEL 5mg/m<sup>3</sup>

**ASCORBIC ACID**

CAS# 50-81-7

Long-term exposure limit (8-hour TWA): WEL 15mg/m<sup>3</sup>**8.2. Exposure controls****Protective equipment****Appropriate engineering controls**

Provide adequate ventilation. This product must not be handled in a confined space without adequate ventilation.

**Eye/face protection**

Tightly sealed safety glasses or face shield.

**Hand protection**

Use protective gloves. The protective gloves to be used must comply with the specifications of the EC directive 89/686/EEC and the resultant standard EN 374. Only use chemical-protective gloves with CE-labelling of category III. Avoid contact with used gloves.

Recommended material of gloves: Nitrile rubber, butyl rubber. Recommended thickness of the material:  $\geq 0.5$  mm

**Other skin and body protection**

Wear suitable protective clothing as protection against splashing or contamination.

**Respiratory protection**

If ventilation is inadequate, suitable respiratory protection must be worn.

<b>SECTION 9: Physical and Chemical Properties</b>
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**9.1. Information on basic physical and chemical properties**

<b>Appearance</b>	Viscous liquid
<b>Colour</b>	Amber, aged is a deep brown to black
<b>Odour</b>	Slightly sweet
<b>pH @20°C</b>	Concentrated solution: N/A Working solution (1:100): 9.5
<b>Relative density/specific gravity</b>	1.22 @20°C

<b>Initial boiling point and range</b>	>300°C @ 760 mm Hg
<b>Initial freezing point and range</b>	<7°C @760mm Hg
<b>Flash point (closed cup)</b>	>93.33°C
<b>Auto-ignition temperature</b>	This product is not self-igniting.
<b>Explosive properties</b>	This product is non-explosive.
<b>Solubility</b>	Miscible
<b>Additional property</b>	Hygroscopic

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

**Reactivity** See the other subsections of this section for further details.

### 10.2. Chemical stability

**Stability** Stable under the prescribed storage conditions. No particular stability concerns.

### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions** Under normal conditions of storage and use, no hazardous reactions will occur.

### 10.4. Conditions to avoid

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

### 10.5. Incompatible materials

**Materials to avoid** Strong acids. Avoid contact with other photographic solutions and/or cleaning compounds.

### 10.6. Hazardous decomposition products

**Hazardous decomposition products** Thermal decomposition or combustion products may include the following substances: oxides of carbon, sodium and nitrogen.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

**Toxicological effects** This chemical formulation has not been tested for health effects. Exposure effects listed are based on existing health data for the individual components that comprise the mixture.



<b>Germ cell mutagenicity</b>	The product contains a substance that is classified as: Suspected of causing genetic defects.
<b>Carcinogenicity</b>	The product contains no carcinogenic substances.
<b>Reproductive toxicity</b>	No data available.
<b>Specific target organ toxicity</b>	STOT - single exposure: No data available.  STOT – repeated exposure: No data available.
<b>Acute and chronic health hazards</b>	Prolonged or repeated exposure may cause severe irritation. May cause skin irritation/eczema. May cause sensitisation by skin contact. Irritating to eyes. Vapour or spray in the eyes may cause irritation and smarting. May cause allergy. May cause hypersensitivity.

<b>Acute toxicity</b>		
<b>LD/LC50 values that are relevant for classification:</b>		
<b>Pyrogallol</b>		
Oral	LD50	790mg/kg (rat)
<b>Triethanolamine</b>		
Oral	LD50	6,400 mg/kg (rat)
<b>L-Ascorbic Acid</b>		
Oral	LD50	11900 mg/kg (rat)
<b>1-phenyl-3-pyrazolidone (Phenidone A)</b>		
Oral	LD50	300 mg/kg (rat)

## SECTION 12: Ecological Information

### 12.1. Toxicity

**Toxicity** The product contains a substance which is harmful to aquatic organisms.

#### **PYROGALLOL**

**Acute toxicity – fish** LC50, 96 hours: 41.8 mg/l, Danio rerio (zebra fish)

**Acute toxicity – aquatic invertebrates** EC50, 24 hours: 47.8 mg/l, Daphnia magna (Water flea)

**Acute toxicity – algae** No data available

**Acute toxicity – bacteria** EC50, 16 hours: 3.8 mg/l, Pseudomonas putida

#### **TRIETHANOLAMINE**

**Acute toxicity – fish** LC50, flow-through test - 96 hours: 11,800 mg/l, Pimephales promelas (fathead minnow)

**Acute toxicity – aquatic invertebrates** EC50, static test – 48 hours: 609.88 mg/l, Ceriodaphnia dubia (water flea)

<b>Acute toxicity – algae</b>	ErC50, static test - 72 hours: 216 mg/l, Desmodesmus subspicatus (green algae)
<b>Acute toxicity – bacteria</b>	IC50, static test - 3 hours activated sludge: > 1,000 mg/l

## L-ASCORBIC ACID

<b>Acute toxicity – fish</b>	LC50, 96 hours: 1,020 mg/l, Oncorhynchus mykiss (rainbow trout)
<b>Acute toxicity – aquatic invertebrates</b>	EC50, 48 hours: 360 mg/l, Daphnia magna (Water flea)
<b>Acute toxicity – algae</b>	IC50, 72 hours: 1,750 mg/l, Desmodesmus subspicatus (green algae)
<b>Acute toxicity – bacteria</b>	EC50, 16 hours: 140mg/l, Pseudomonas putida

## 1-PHENYL-3-PYRAZOLIDONE (PHENIDONE A)

<b>Acute toxicity – fish</b>	No data available
<b>Acute toxicity – aquatic invertebrates</b>	EC50, 48 hours: 6.25 mg/l, Daphnia magna (Water flea)
<b>Acute toxicity – algae</b>	No data available
<b>Acute toxicity – bacteria</b>	EC50, 5 min: 3.02 mg/l, photobacterium phosphoreum

### 12.2. Persistence and degradability

<b>Persistence and degradability</b>	Triethanolamine is rapidly biodegradable. L-ascorbic acid and pyrogallol are readily biodegradable. 1-phenyl-3-pyrazolidone (Phenidone A) is inherently biodegradable.
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### 12.3. Bioaccumulation

<b>Bioaccumulation</b>	No data available. Unlikely as product is soluble in water.
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### 12.4. Mobility in soil

<b>Mobility in soil</b>	Product is soluble in water.
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### 12.5. Results of PBT and vPvB assessment

<b>Results of PBT and vPvB assessment</b>	This product does not contain any substances classified as PBT or vPvB.
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## **SECTION 13: Disposal considerations**

### 13.1. Waste treatment methods

<b>Disposal methods</b>	Used, diluted, and spent solutions may be allowed to be discharged to sanitary sewer by permit IF allowed by local
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regulations. Consult your local authority for advice. Waste may have to be pre-treated before discharge. Consult local authorities before discharging any waste to sewer. Waste that cannot be discharged to sewer may have to be handled by a licensed hazardous waste contractor.

Waste class 09 01 01

#### SECTION 14: Transport information

Not regulated for all modes of transportation.

<b>UN Number (ADR/RID, IMDG, IATA)</b>	N/A
<b>UN Proper Shipping Name (ADR/RID, IMDG, IATA)</b>	Not applicable
<b>Transport Hazard Class(es) ADR/RID, IMDG, IATA</b>	None
<b>Packing group (ADR/RID, IMDG, IATA)</b>	Not applicable
<b>Environmental hazards</b>	None
<b>Special precautions for user</b>	None
<b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable
<b>Transport/Additional Information</b>	These substances when transported in single or combination packaging contains a net quantity per single or inner packaging of 5l or less for liquids are not subject to any other provisions of these regulations provided the packaging meet the general. See the following notes:
<b>ADR/RID</b>	Goods are not subject to the provisions in accordance with the special provision 375 ADR.
<b>IMDG</b>	Goods are not subject to the provisions in accordance with 2.10.2.7 IMDG-Code.
<b>IATA</b>	Goods are not subject to the provisions in accordance with the special provision 197 IATADGR.

#### SECTION 15: Regulatory information

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

EU legislation

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).

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).

Commission Decision 2000/532/EC as amended by Decision 2001/118/EC establishing a list of wastes and hazardous waste pursuant to Council Directive 75/442/EEC on waste and Directive 91/689/EEC on hazardous waste with amendments.

## Guidance

Workplace Exposure Limits EH40.

Worksafe Australia NOHSC 2012: Labelling of workplace substances.

Australian Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).

Australian Approved Criteria for Classifying Hazardous Substances (NOHSC 1008).

Australian List of Designated Hazardous Substances (NOHSC 10005).

Australian National Code of Practice for the Preparation of Material safety Data Sheets (NOHSC 2011)

## 15.2. Chemical Safety Assessment

A chemical safety assessment has not been carried out.

## **SECTION 16: Other information**

### General information

Zone Imaging Ltd believe the information and recommendations contained herein are based on correct and factual data. However, no express or implied guarantee or warranty of any kind is made with respect to this information. Use this information only to supplement other information you have gathered and then make an independent determination about the completeness and suitability of all information to ensure the proper use and disposal of this product and the health and safety of employees and customers.

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## Abbreviations and acronyms

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road (Accord Européen sur le Transport des Marchandises Dangereuses par Route)

RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EC: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration at which 50% of the animals will be expected to die.

LD50: Lethal dose at which 50% of the animals will be expected to die.

EC50: Effective concentration of test substance which results in a 50 percent reduction in either algae growth (EbC50) or algae growth rate (ErC50) or Daphnia immobilization.

## Hazard statements in full

**H302** – Harmful if swallowed. Acute tox. 4

**H312** – Harmful if in contact with skin. Acute tox. 4

**H332** – Harmful if inhaled. Acute tox. 4

**H315** – Causes skin irritation. Skin irritation 2

**H317** – May cause an allergic skin reaction. Skin sens. 1

**H319** – Causes serious eye irritation. Eye dam. 2

**H341** – Suspected of causing genetic defects. Muta. 2