

SAFETY DATA SHEET

TASS02_Periodic Acid-Schiff (PAS)

Section 1. Identification

GHS product identifier :

Periodic Acid-Schiff (PAS)

Product Code:

TASS02

Other means of identification:

Not available.

Supplier/Manufacturer :

BioTnA Inc.

3F-1., Qixian 2nd Rd., Qianjin Dist., Kaohsiung
City 801, Taiwan

In case of emergency :

+886-7-2612017

Section 2. Hazards identification

1. Periodic Acid

OSHA/HCS status:

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture:

Skin corrosion - Category 1

Serious eye damage - Category 1

Aquatic hazard (Long-Term) - Category 3

GHS label elements Hazard pictograms:



Signal word :

Danger

Hazard statements :

H314 - Causes severe skin burns and eye damage.

H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements Prevention :

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye or face protection. Avoid breathing vapor. Wash hands

Periodic Acid-Schiff (PAS)

Response:

thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. IF exposed or concerned: Get medical attention. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Storage:

Not applicable..

Disposal:

P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified:

None known.

2. Hematoxylin

OSHA/HCS status:

This material is considered hazardous by the OSHA Hazard Communication Standard ((EC) No 1272/2008).

Classification of the substance or mixture:

Serious eye damage -Category 1
Specific target organ toxicity - repeated exposure , Oral-Category 2

GHS label elements Hazard pictograms:



Signal word :

Danger

Hazard statements :

H302 Harmful if swallowed

H318 Causes serious eye damage

H373 May cause damage to organs (kidney) through prolonged or repeated exposure (if swallowed)

Precautionary statements Prevention :

Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye or face protection. Avoid breathing vapor. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

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Response:

IF exposed or concerned: Get medical attention. IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Storage:

Not applicable..

Disposal:

P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations..

Hazards not otherwise classified:

Contains Sodium iodate.

May produce an allergic reaction.

3. Schiff Reagent

OSHA/HCS status:

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture:

Corrosive to metals Category 1.

Serious Eye Damage/Eye Irritation Category 2.

Carcinogenicity Category 2.

GHS label elements Hazard pictograms:



Signal word :

Warning

Hazard statements :

H319 - Causes serious eye irritation.

H290 May be corrosive to metals.

H350 - May cause cancer.

Precautionary statements Prevention :

Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye or face protection. Avoid breathing vapor. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.

Response:

IF exposed or concerned: Get medical attention. IF ON SKIN: Wash with plenty of soap and water. Wash

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contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Storage:

Store in a well-ventilated place. Keep container tightly closed. Keep cool.

Disposal:

Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified:

None known.

Section 3. Composition/information on ingredients

Substance/mixture: Mixture

1. Periodic Acid

Ingredient name	Wt%	CAS number
Water	>99	7732-18-5
Periodic acid	<1	10450-60-9

2. Hematoxylin

Ingredient name	Wt%	CAS number
Water	90	7732-18-5
Hematoxylin	0.1-<0.5	517-28-2
Aluminium potassium sulfate dodecahydrate	5-<10	7784-24-9
Acetic acid	1-<5	64-19-7
Sodium iodate	0.01-<0.05	7681-55-2

3. Schiff Reagent

Ingredient name	Wt%	CAS number
Basic fuchsin	<1	569-61-9
Water	>85	7732-18-5
Hydrochloric acid	≤1	7647-01-0
Sodium pyrosulfite	<2	7681-57-4

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact:

Immediately flush eyes with plenty of water, also lifting the upper and lower eyelids. Continue to rinse for at least 10 minutes. Get medical attention immediately.

Inhalation:

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention immediately if symptoms occur.

Skin contact:

Wash with plenty of water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it. Continue to rinse for at least 10 minutes. Get medical attention immediately if symptoms occur.

Ingestion:

Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

Most important symptoms/effects, acute and delayed Potential acute health effects

None reasonably foreseeable

Section 5. Fire-fighting measures

Extinguishing media

1. Periodic Acid

Suitable extinguishing media:

Use an extinguishing agent suitable for the surrounding fire.

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Unsuitable extinguishing media:

Specific hazards arising from the chemical :

Hazardous thermal decomposition products:

Special protective actions for fire-fighters:

Special protective :

None known

In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

No specific data

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Fire-fighters should wear appropriate protective equipment and self-contained breathing equipment for fire-fighters apparatus (SCBA) with a full face-piece operated in positive pressure mode.

2. Hematoxylin

Suitable extinguishing media:

Unsuitable extinguishing media:

Specific hazards arising from the chemical :

Hazardous thermal decomposition products:

Special protective actions for fire-fighters:

Special protective :

water spray, alcohol resistant foam, dry extinguishing powder, BC-powder, carbon dioxide (CO₂).

water jet.

No specific fire or explosion hazard

Carbon monoxide (CO), Carbon dioxide (CO₂)

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Fire-fighters should wear appropriate protective equipment and self-contained breathing equipment for fire-fighters apparatus (SCBA) with a full face-piece operated in positive pressure mode.

3. Schiff Reagent

Suitable extinguishing media:

Unsuitable extinguishing media:

Specific hazards arising from the chemical :

Hazardous thermal decomposition products:

Special protective actions for fire-fighters:

Use an extinguishing agent suitable for the surrounding fire.

None known.

In a fire or if heated, a pressure increase will occur and the container may burst.

None known.

Promptly isolate the scene by removing all persons

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Special protective :

from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Fire-fighters should wear appropriate protective equipment and self-contained breathing equipment for fire-fighters apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel:

Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders :

If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".

Environmental precautions:

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill :

Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill :

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations

(see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures:

Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene:

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities:

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid

environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

1. Periodic Acid

Ingredient name	CAS-No	Control parameters	Basis
Periodic Acid	10450-60-9	N/A	Standards of Permissible Exposure Limits in Workplace

2. Hematoxylin

Ingredient name	CAS-No	Control parameters	Basis
acetic acid	64-19-7	STEL- 20ppm 15 min. TWA-10ppm 8 hours.	Standards of Permissible Exposure Limits in Workplace

3. Schiff Reagent

Ingredient name	CAS-No	Control parameters	Basis
Hydrochloric acid	7647-01-0	TWA-Ceiling: 2 ppm.	Standards of Permissible Exposure Limits in Workplace
Sodium pyrosulfite	7681-57-4	STEL: 15 mg/m ³ 15 min. TWA: 5 mg/m ³ 8 hr.	

Appropriate engineering controls :

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls :

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Individual protection measures

Hygiene measures:

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection:

Safety eyewear complying with an approved standard

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should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/ or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection :

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection:

Personal protective equipment for the body should be selected based on the task being performed and the risks involved.

Other skin protection:

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved.

Respiratory protection:

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

1. Periodic Acid

Physical state:

Liquid.

Color:

Clear. Colorless.

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Flash point:	Not available.
Auto-ignition temperature:	Not available.
Flammable limits:	Not available.
Molecular weight:	Not applicable.
Molecular formula:	Not applicable.
pH:	Not applicable.
Boiling/condensation point:	Not available.
Melting/freezing point:	Not available.
Relative density:	Not available.
Vapor pressure:	Not available.
Vapor density:	Not available.
Volatility:	Not available.
Evaporation rate:	Not available.
Viscosity:	Not available.
Solubility:	Easily soluble in the following materials: cold water and hot water

2. Hematoxylin

Physical state:	Liquid.
Color:	red violet.
Flash point:	Not available.
Auto-ignition temperature:	Not available.
Flammable limits:	Not available.
Molecular weight:	Not applicable.
Molecular formula:	Not applicable.
pH:	2 – 3 (25 °C).
Boiling/condensation point:	Not available.
Melting/freezing point:	Not available.
Relative density:	Not available.
Vapor pressure:	Not available.
Vapor density:	Not available.
Volatility:	Not available.
Evaporation rate:	Not available.
Viscosity:	Not available.
Solubility:	Water solubility :miscible in any proportion.

3. Schiff Reagent

Physical state:	Liquid.
Color:	Clear. light pink.
Flash point:	Not available.

Periodic Acid-Schiff (PAS)

Auto-ignition temperature:	Not available.
Flammable limits:	Not available.
Molecular weight:	Not applicable.
Molecular formula:	Not applicable.
pH:	Not applicable.
Boiling/condensation point:	100 °C (212 °F).
Melting/freezing point:	Not available.
Relative density:	Not available.
Vapor pressure:	Not available.
Vapor density:	Not available.
Volatility:	Not available.
Evaporation rate:	> 1 (Ether = 1.0).
Viscosity:	Not available.
Solubility:	Easily soluble in the following materials: cold water and hot water

Section 10. Stability and reactivity

1. Periodic Acid

Reactivity:	No data available.
Chemical stability:	The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Possibility of hazardous:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid:	No specific data.
Incompatible materials:	Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air. Reactive or incompatible with the following materials: alkalis .
Hazardous decomposition:	Hazardous combustion products: see section 5.

2. Hematoxylin

Reactivity:	This material is not reactive under normal ambient conditions
Chemical stability:	The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Possibility of hazardous:	Violent reaction with: Alkali hydroxide (caustic alkali),

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Conditions to avoid:

Incompatible materials:

Hazardous decomposition:

3. Schiff Reagent

Reactivity:

Chemical stability:

Possibility of hazardous:

Conditions to avoid:

Incompatible materials:

Hazardous decomposition:

Aluminium, Chlorates, Permanganates, Peroxides, strong oxidiser

No specific data.

There is no additional information.

Hazardous combustion products: see section 5.

Substance or mixture corrosive to metals.

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Violent reaction with: strong oxidiser, Strong alkali.

Incompatible products. Excess heat..

Metals, Strong oxidizing agents

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Hazardous combustion products: see section 5.

Section 11. Toxicological information

Information on toxicological effects

1. Periodic Acid

Acute toxicity

Product/ingredient name	Result	Species	Dose
Water	-	-	-
Periodic acid	Oral	-	No data available
	Inhalation	-	No data available
	Dermal	-	No data available

Irritation/Corrosion:

Eyes - Severe irritant.

Skin irritation

Sensitization:

Not available.

Mutagenicity:

Not available.

Carcinogenicity:

Not available.

Reproductive toxicity:

Not available.

Teratogenicity:

Not available.

Specific target organ toxicity (single exposure)

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Specific target organ toxicity (repeated exposure) :	Ingestion - Causes damage to organs through prolonged or repeated exposure. - Thyroid
Aspiration hazard:	Not available.
Information on the likely routes of exposure:	Dermal contact. Eye contact. Ingestion..
Potential acute health effects:	Not available.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact :	Causes serious eye irritation
Inhalation :	No specific data.
Skin contact :	Causes severe burns.
Ingestion:	Adverse symptoms may include the following: stomach pains

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects:	Not available.
Potential delayed effects:	Not available.

Long term exposure

Potential immediate effects:	Not available.
Potential delayed effects:	Not available.
Potential chronic health effects:	Not available.
General:	Not available.
Carcinogenicity:	Not listed
Mutagenicity:	No known significant effects or critical hazards.
Teratogenicity:	No known significant effects or critical hazards.
Developmental effects:	No known significant effects or critical hazards.
Fertility effects:	No known significant effects or critical hazards.

Numerical measures of toxicity /Acute toxicity estimates

Route	ATE value
Oral	N/A
Inhalation (vapors)	N/A

2.Hematoxylin

Acute toxicity

Product/ingredient name	Result	Species	Dose
Water	-	-	-
Acetic acid	LD50 Oral	Rat	3.310 mg/kg
Sodium iodate	LD50 Oral	Mouse	505 mg/kg
Potassium aluminum	LD50 Oral	Mouse	>2 g/kg

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sulfate			
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Irritation/Corrosion:	Eyes - Severe irritant.
Sensitization:	Not available.
Mutagenicity:	Not available.
Carcinogenicity:	Not available.
Reproductive toxicity:	Not available.
Teratogenicity:	Not available.

Specific target organ toxicity (single exposure)

Specific target organ toxicity (repeated exposure) :	kidney.
Aspiration hazard:	Shall not be classified as presenting an aspiration hazard.
Information on the likely routes of exposure:	Dermal contact. Eye contact. Ingestion..
Potential acute health effects:	Not available

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact :	Causes serious eye damage, risk of blindness.
Inhalation :	No specific data.
Skin contact :	May produce an allergic reaction, pruritis, localised redness
Ingestion:	gastrointestinal complaints, nausea, vomiting, renal impairment

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure	
Potential immediate effects:	Not available.
Potential delayed effects:	Not available.
Long term exposure	
Potential immediate effects:	Not available.
Potential delayed effects:	Not available.
Potential chronic health effects:	Not available.
General:	Not available.
Carcinogenicity:	Not listed
Mutagenicity:	No known significant effects or critical hazards.
Teratogenicity:	No known significant effects or critical hazards.
Developmental effects:	No known significant effects or critical hazards.
Fertility effects:	No known significant effects or critical hazards.

Numerical measures of toxicity /Acute toxicity estimates

Route	ATE value
Oral	505 mg/kg

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3. Schiff Reagent

Acute toxicity

Product/ingredient name	Result	Species	Dose
Hydrochloric acid	LD50 Dermal	Rabbit	> 5010 mg/kg
	LD50 Oral	Rat	238 - 277 mg/kg
	LC50 Inhalation	Rat	1.68 mg/L 1hr
Sodium pyrosulfite	LD50 Oral	Rat	1310 mg/kg
	LD50 Dermal	Rat	> 2000 mg/kg

Irritation/Corrosion: Irritating to eyes and skin..

Sensitization: Not available.

Mutagenicity: Not available.

Carcinogenicity: Not available.

Reproductive toxicity: Not available.

Teratogenicity: Not available.

Specific target organ toxicity (single exposure)

Specific target organ toxicity (repeated exposure) : Not available.

Aspiration hazard: Not available.

Information on the likely routes of exposure: Dermal contact. Eye contact. Ingestion..

Potential acute health effects: Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Causes serious eye irritation

Inhalation : Irritant effects.

Skin contact : Frequently or prolonged contact with skin may cause dermal irritation.

Ingestion: Not available.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects: Not available.

Potential delayed effects: Not available.

Long term exposure

Potential immediate effects: Not available.

Potential delayed effects: Not available.

Potential chronic health effects: Not available.

General: Not available.

Carcinogenicity: May cause cancer. Risk of cancer depends on

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Mutagenicity:

duration and level of exposure.

Teratogenicity:

Suspected of causing genetic defects.

Developmental effects:

No known significant effects or critical hazards.

Fertility effects:

No known significant effects or critical hazards.

No known significant effects or critical hazards.

Numerical measures of toxicity /Acute toxicity estimates

Route	ATE value
Oral LD50	ATE > 2000 mg/kg
Vapors LC50	ATE > 20 mg/l.

Section 12. Ecological information

Toxicity

1. Periodic Acid

ingredient name	Resul	Species	Exposure
Periodic acid	Acute EC50 0.18 mg/l	Fresh water Daphnia	48 hours
	Acute LC50 >0.17 mg/l	Fresh water Fish	96 hours
	Acute NOEC 0.099 mg/l	Fresh water Daphnia	48 hours

Persistence and degradability:

Not available.

Bioaccumulative potential:

Not available.

Mobility in soil

Soil/water partition coefficient (KOC):

Not available.

Other adverse effects:

No known significant effects or critical hazards.

2.Hematoxylin

ingredient name	Resul	Species	Exposure
Acetic acid	Acute EC50 >300,8 mg/l	Aquatic invertebrates	48 hours
	Acute LC50 >300,8 mg/l	Fish	96 hours
Sodium iodate	Acute LC50 350 mg/l	Fish	96 hours
Potassium aluminum sulfate	LC50: < 10000 mg/L	Fish	96 hours

Persistence and degradability:

Soluble in water, Persistence is unlikely, based on information available. Not relevant for inorganic substances.

Bioaccumulative potential:

Not available.

Mobility in soil

Soil/water partition coefficient (KOC):

The product is water soluble, and may spread in water systems Will likely be mobile in the

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environment due to its water solubility. Highly mobile in soils.

Other adverse effects:

No known significant effects or critical hazards.

3. Schiff Reagent

ingredient name	Resul	Species	Exposure
Hydrochloric acid	Acute EC50 56mg/L	Water Flea-Daphnia	72 hours
	Acute LC50 282 mg/L	Freshwater Fish-Gambusia affinis	96 hours
Sodium pyrosulfite	LC50: = 32 mg/L, static	Freshwater Fish- Lepomis macrochirus	96h
	EC50: = 40 mg/L EC50: = 48 mg/L	Freshwater Algae- Desmodesmus subspicatus	96h 72h

Persistence and degradability:

Not available.

Bioaccumulative potential:

Not available.

Mobility in soil

Soil/water partition coefficient (KOC):

Not available.

Other adverse effects:

No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods:

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain

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some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID Classification	IMDG Classification	IATA Classification
UN number	UN1789	UN1789.	Not regulated.	Not regulated.	UN1789.	UN1789
UN proper shipping name	Hydrochloric acid solution	Hydrochloric acid solution	-	-	Hydrochloric acid solution	Hydrochloric acid solution
Transport hazard class(es)	8	8	-	-	8	8
Packing group	III	III	-	-	III	III
Environmental hazards	No.	No.	No.	No.	No.	No.
Additional information		-	-	-	-	-

Special precautions for user:

Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according:

Not available.

Section 15. Regulatory information

Contents	Ingredient	CAS No	TSCA (Toxic Substances Control Act)	Section 313 (Emission Reporting)	Section 302 (Threshold Planning Quantity)
Periodic acid	Periodic acid	10450-60-9	on the list	-	-
Hematoxylin	Hematoxylin	517-28-2	All ingredients are listed.	-	

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Schiff's Reagent	Hydrogen chloride	7647-01-0	on the list	1.0 % (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)	500 (gas only)
	Sodium pyrosulfite	7681-57-4	on the list	-	-

Proposition 65

Chemicals known to cause cancer:	None of the ingredients is listed.
Chemicals known to cause reproductive toxicity:	None of the ingredients is listed.
Hazard symbol:	No listed.
Risk phrases:	irritating to eyes and skin
Product related hazard information:	No listed.
Water hazard class:	No listed.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals
Not listed.

Montreal Protocol (Annexes A, B, C, E)

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Inform Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Section 16. Other information

Date of issue/Date of revision: 07/16/2024.

Date of previous issue : 05/28/2023.

Version: 3

Key to abbreviations :

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IATA = International Air Transport Association

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IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

UN = United Nations

Indicates information that has changed from previously issued version.

Notice to reader

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