

SAFETY DATA SHEET

According to JIS Z 7253:2019
Revision date 20-Feb-2024
 Revision Number 5.06

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name	Mayer's Hematoxylin Solution
Product Code	131-09665

Supplier FUJIFILM Wako Pure Chemical Corporation
 1-2 Doshomachi 3-Chome, Chuo-ku, Osaka 540-8605, Japan
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Recommended uses For research use only

Restrictions on use Seek expert judgment when using for purposes other than those recommended.

Section 2: HAZARDS IDENTIFICATION

GHS classification

Classification of the substance or mixture

Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1B
Specific target organ toxicity (single exposure)	Category 1
Category 1 central nervous system, heart	
Specific target organ toxicity (repeated exposure)	Category 1, Category 2
Category 1 central nervous system	
Category 2 liver	

Pictograms



Signal word Danger

Hazard statements

- H314 - Causes severe skin burns and eye damage
- H318 - Causes serious eye damage
- H340 - May cause genetic defects
- H350 - May cause cancer
- H370 - Causes damage to the following organs: central nervous system, heart
- H372 - Causes damage to the following organs through prolonged or repeated exposure: central nervous system
- H373 - May cause damage to the following organs through prolonged or repeated exposure: liver

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
- Do not breathe dust/fume/gas/mist/vapors/spray
- Wash face, hands and any exposed skin thoroughly after handling

- Do not eat, drink or smoke when using this product

Precautionary statements-(Response)

- 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 doctor/physician
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- Wash contaminated clothing before reuse
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

Precautionary statements-(Storage)

- Store locked up

Precautionary statements-(Disposal)

- Dispose of contents/container to an approved waste disposal plant

Others

Other hazards Not available

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Single Substance or Mixture Mixture

Chemical Name	Weight-%	Molecular weight	ENCS	ISHL No.	CAS RN
Water	89.8	18.02	N/A	N/A	7732-18-5
Aluminium Potassium Sulfate	5.0	258.21	(1)-454,(1)-25	*	10043-67-1
Chloral hydrate	5.0	165.40	- (2)-528	2-(8)-189, -(8)-375	302-17-0
Hematoxiline	0.10	302.28	(5)-3664	*	517-28-2
Citric Acid Monohydrate	0.10	210.14	(2)-1318	*	5949-29-1

Note on ISHL No.: * in the table means announced chemical substances.

Substances Remarks:

The composition considered to be hazardous are listed in the above. The remaining ingredients are not hazardous substances, or exist at below reportable level.

Section 4: FIRST AID MEASURES

Inhalation

Remove to fresh air. If symptoms persist, call a physician.

Skin contact

Wash off immediately with soap and plenty of water. If symptoms persist, call a physician.

Eye contact

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediate medical attention is required.

Ingestion

Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. Do not induce vomiting without medical advice.

Protection of first-aiders

Use personal protective equipment as required.

Section 5: FIRE FIGHTING MEASURES

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

Unsuitable extinguishing media

No information available

Specific hazards arising from the chemical product

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Special extinguishing method

No information available

Special protective actions for fire-fighters

Use personal protective equipment as required. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For indoor, provide adequate ventilation process until the end of working. Deny unnecessary entry other than the people involved by, for example, using a rope. While working, wear appropriate protective equipments to avoid adhering it on skin, or inhaling the gas. Work from windward, and retract the people downwind.

Environmental precautions

To be careful not discharged to the environment without being properly handled waste water contaminated.

Methods and materials for contaminant and methods and materials for cleaning up

Absorb dry sand, earth, sawdust and the waste. Collect empty container that can be sealed.

Recovery, neutralization

No information available

Secondary disaster prevention measures

Clean contaminated objects and areas thoroughly observing environmental regulations.

Section 7: HANDLING AND STORAGE

Handling

Technical measures

Use with local exhaust ventilation.

Precautions

Do not rough handling containers, such as upsetting, falling, giving a shock, and dragging. Prevent leakage, overflow, and scattering. Not to generate steam and dust in vain. Seal the container after use. After handling, wash hands and face, and then gargle. In places other than those specified, should not be smoking or eating and drinking. Should not be brought contaminated protective equipment and gloves to rest stops. Deny unnecessary entry of non-emergency personnel to the handling area.

Safety handling precautions

Avoid contact with skin and eyes Use personal protective equipment as required.

Storage

Safe storage conditions

Storage conditions

Keep container protect from light tightly closed. Store in a cool (2-10 °C) place.

Safe packaging material

Glass

Incompatible substances

No information available

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls

In case of indoor workplace, seal the source or use a local exhaust system. Provide the safety shower facility, and hand- and eye-wash facility. And display their position clearly.

Exposure limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Personal protective equipment

Respiratory protection

Protective mask

Hand protection

chemical protective gloves (JIS T 8116)

Eye protection

protective eyeglasses or chemical safety goggles (JIS T 8147)

Skin and body protection

Long-sleeved work clothes

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.
If this product is classified as "Chemical Substances Hazardous to Skin, etc.", use appropriate protective equipment to them.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Form	
Color	reddish brown
Appearance	liquid
Odor	no data available
Melting point/freezing point	no data available
Boiling point, initial boiling point and boiling range	no data available
Flammability	no data available
Evaporation rate:	no data available
Flammability (solid, gas):	no data available
Upper/lower flammability or explosive limits	
Upper:	no data available
Lower:	no data available
Flash point	no data available
Auto-ignition temperature:	no data available
Decomposition temperature:	no data available
pH	2.0 - 3.0 (25°C)
Viscosity (coefficient of viscosity)	no data available
Dynamic viscosity	no data available
Solubilities	water , Ethanol and acetone : Very soluble.
n-Octanol/water partition coefficient:(log Pow)	no data available
Vapour pressure	no data available
Specific Gravity / Relative density	no data available
Vapour density	no data available
Particle characteristics	no data available

Section 10: STABILITY AND REACTIVITY

Stability

Reactivity	no data available
Chemical stability	May be altered by light.
Hazardous reactions	None under normal processing
Conditions to avoid	Extremes of temperature and direct sunlight
Incompatible materials	No information available
Hazardous decomposition products	Carbon monoxide (CO), Carbon dioxide (CO ₂), Sulfur oxides (SO _x), Halides, Metal oxides

Section 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Chloral hydrate	480 mg/kg (Rat)	3030 mg/kg (Rat)	N/A

Chemical Name	Acute toxicity -oral- source information	Acute toxicity -dermal- source information	Acute toxicity -inhalation gas-source information
Chloral hydrate	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Chemical Name	Acute toxicity -inhalation	Acute toxicity -inhalation dust-	Acute toxicity -inhalation mist-
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	vapor- source information	source information	source information
Chloral hydrate	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Skin irritation/corrosion

Chemical Name	Skin corrosion/irritation source information
Chloral hydrate	Based on the NITE GHS classification results.

Serious eye damage/ irritation

Chemical Name	Serious eye damage/irritation source information
Chloral hydrate	Based on the NITE GHS classification results.

Respiratory or skin sensitization

Chemical Name	Respiratory or Skin sensitization source information
Chloral hydrate	Based on the NITE GHS classification results.

Reproductive cell mutagenicity

Chemical Name	germ cell mutagenicity source information
Chloral hydrate	Based on the NITE GHS classification results.

Carcinogenicity

Chemical Name	Carcinogenicity source information
Chloral hydrate	Based on the NITE GHS classification results.

Chemical Name	NTP	IARC	ACGIH	JSOH (Japan)
Chloral hydrate 302-17-0		Group 2A		

Reproductive toxicity

Chemical Name	Reproductive toxicity source information
Chloral hydrate	Based on the NITE GHS classification results.

STOT-single exposure

Chemical Name	STOT -single exposure- source information
Chloral hydrate	Based on the NITE GHS classification results.

STOT-repeated exposure

Chemical Name	STOT -repeated exposure- source information
Chloral hydrate	Based on the NITE GHS classification results.

Aspiration hazard

Chemical Name	Aspiration Hazard source information
Chloral hydrate	Based on the NITE GHS classification results.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Chloral hydrate	N/A	N/A	EC50: <i>Daphnia magna</i> 500 mg/L 48 h

Other data

Chemical Name	Short-term (acute) hazardous to the aquatic environment source information	Long-term (chronic) hazardous to the aquatic environment source information
Chloral hydrate	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Persistence and degradability	No information available
Bioaccumulative potential	No information available
Mobility in soil	No information available
Hazard to the ozone layer	No information available

Section 13: DISPOSAL CONSIDERATIONS

Waste from residues

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated container and contaminated packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14: TRANSPORT INFORMATION**ADR/RID**

UN number UN1760
 Proper shipping name: Corrosive liquid, n.o.s. (2,2,2-trichloroethane-1,1-diol mixture)
 UN classification 8
 Subsidiary hazard class
 Packing group II
 Marine pollutant Not applicable

IMDG

UN number UN1760
 Proper shipping name: Corrosive liquid, n.o.s. (2,2,2-trichloroethane-1,1-diol mixture)
 UN classification 8
 Subsidiary hazard class
 Packing group II
 Marine pollutant (Sea) Not applicable
 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available

IATA

UN number UN1760
 Proper shipping name: Corrosive liquid, n.o.s. (2,2,2-trichloroethane-1,1-diol mixture)
 UN classification 8
 Subsidiary hazard class
 Packing group II
 Environmentally Hazardous Substance Not applicable

Section 15: REGULATORY INFORMATION**Japanese regulations**

Fire Service Act Not applicable
Poisonous and Deleterious Substances Control Law Not applicable
Industrial Safety and Health Act Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57)
 Notifiable Substances (Law Art.57-2)
Industrial Safety and Health Act (2024~) 【2024.4.1~】 Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57)
 【2024.4.1~】 Notifiable Substances (Law Art.57-2)
 【2024.4.1~】 Substances designated by the Minister of Health, Labor and Welfare as carcinogenic(Ordinance on Industrial Safety and Health Art.577, Para.2)
 【2024.4.1~】 Chemical Substances Hazardous to Skin, etc.(Regulations Article 594-2 Paragraph 1)
Regulations for the carriage and storage of dangerous goods in ship Corrosive Substances (Ordinance Art.3, Ministry of Transportation Ordinance Regarding Transport by Ship and Storage, Attached Table 1)
Civil Aeronautics Law Corrosive Substances (Ordinance Art.194, MITL Notification for Air Transportation of Explosives etc., Attached Table 1)
Pollutant Release and Transfer Register Law (2023.4.1-) Not applicable
Water Pollution Control Act Specified substances(Law Art.2 Para.4, Enforcement Order Art.3-3)
Export Trade Control Order Not applicable

Industrial Safety and Health Law

Law Name	Chemical Name in Regulation	Weight %
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Notifiable Substances (Law Art.57-2)	2,2,2-trichloro-1,1-ethanediol (alias: chloral hydrate)	5.0	2024/4/1
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Chemical Name	Poisonous and Deleterious Substances Control Law	Industrial Safety and Health Act Substances (Law Art.57-2)	Pollutant Release and Transfer Register Law (2023.4.1-)
Aluminium Potassium Sulfate 10043-67-1 (5.0)	-	Applicable	-

Section 16: OTHER INFORMATION

Key literature references and sources for data etc.

NITE: National Institute of Technology and Evaluation (JAPAN)
<http://www.safe.nite.go.jp/japan/db.html>
 IATA dangerous Goods Regulations
 RTECS:Registry of Toxic Effects of Chemical Substances
 Japan Industrial Safety and Health Association GHS Model SDS
 Dictionary of Synthetic Organic Chemistry , SSOCJ, Koudansha Scientific Co.Ltd.
 Chemical Dictionary, Kyouritsu Publishing Co., Ltd.
 etc

Record of SDS revisions

The following contents were revised. Product and company Identification. Hazards identification. Composition/information on ingredients. Exposure controls/personal protection. Stability and reactivity. Transport information. Regulatory information.

Disclaimer

This SDS is according to JIS Z 7253: 2019. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

GHS Classification is according to JIS Z 7252:2019. *JIS: Japanese Industrial Standards

End of Safety Data Sheet