



Component #1 of Reagent #1 and Reagent #2, part of the Tissue-Tek Genie® DAB Cleaning Reagent Kit

Safety Data Sheet

US-SDS according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

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SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : Component #1 of Reagent #1 and Reagent #2, part of the Tissue-Tek Genie® DAB Cleaning Reagent Kit
Product code : 8607-M030, 8608-M030, part of 8606-K060

1.2. Recommended use and restrictions on use

For use with Tissue-Tek Genie® Advanced Staining System

1.3. Supplier

Sakura Finetek USA Inc.
1750 West 214th St.
Torrance, CA 90501
T 1-310-972-7800

1.4. Emergency telephone number

CHEMTREC 1-800-424-9300
Email: SDSsupport@sakuraus.com

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Not classified

2.2. GHS Label elements, including precautionary statements

Environmental Hazards H402 Hazardous to aquatic environment- Acute, Category 3
H412 Hazardous to aquatic environment-chronic, Category 3
Hazard Statement H412 Harmful to aquatic life with long lasting effects
H402 Harmful to aquatic life
Precautionary Statement & Prevention P273 Avoid release to the environment

2.3. Other hazards which do not result in classification

None Known

2.4. Unknown acute toxicity (GHS US)

Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations and product characteristics at time of disposal.

SECTION 3: Composition/Information on ingredients

3.1. Substances

Mixture

Component #1 of Reagent #1 and Reagent #2, part of the Tissue-Tek Genie® DAB Cleaning Reagent Kit

Safety Data Sheet

US-SDS according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

3.2. Mixtures

Name	CAS Number	%
Potassium Permanganate	7722-64-7	0.63
Water	7732-18-5	99.37

The specific chemical component identities and/or the exact component percentages of this material may be withheld as trade secrets.

This information is made available to health professionals, employees, and designated representatives in accordance with the applicable provisions of 29 CFR 1910.1200 (I)(1). Trace ingredients (if any) are present in < 1% concentration, (< 0.1% for potential carcinogens, mutagen, and reproductive toxicant, respiratory tract and skin sensitizers in addition to oral/ inhalation acute toxicant in category 1 and 2). None of the trace ingredients contribute significant additional hazards at the concentrations that may be present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalents.

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Move to fresh air. Call a physician or poison control center immediately. If breathing stops, provide artificial respiration. If breathing is difficult give oxygen.
First-aid measures after skin contact	: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician or poison control center immediately. Wash contaminated clothing before reuse.
First-aid measures after eye contact	: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.
First-aid measures after ingestion	: Call a physician or poison control center immediately. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get in to the lungs.

4.2. Most important symptoms and effects (acute and delayed)

Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Immediate medical attention and special treatment, if necessary

Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	Water spray, sand, foam, dry powder or carbon dioxide.
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5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire	Water runoff can cause environmental damage; avoid releasing to water bodies.
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5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting	: Firefighters must use standard protective equipment including flame retardant equipment for fire-fighters coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Wear self-contained breathing apparatus and protective fire-fighting clothing.
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Component #1 of Reagent #1 and Reagent #2, part of the Tissue-Tek Genie® DAB Cleaning Reagent Kit

Safety Data Sheet

US-SDS according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Use personal protective equipment.

6.1.2. For emergency responders

Protective equipment : Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See Section 8 of the SDS for Personal Protective Equipment. Avoid contact with skin, eyes and clothing.

6.2. Environmental precautions

Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Stop leak if it can be done without risk. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Use only with adequate ventilation.

Hygiene measures : Wash hands thoroughly after handling. See Section 8 of the SDS for Personal Protective Equipment.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep away from food, drink and animal feeding stuffs. Keep out of reach of children. Keep container tightly closed in a cool, well-ventilated place. Store in a dry place away from direct sunlight. Store away from incompatible materials. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of chemicals. Incompatible with strong acids, strong bases, strong reducing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits
Potassium permanganate: No applicable occupational exposure limits to this concentration and used as intended

Component #1 of Reagent #1 and Reagent #2, part of the Tissue-Tek Genie® DAB Cleaning Reagent Kit

Safety Data Sheet

US-SDS according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

US. ACGIH Threshold Limit Values			
Components	Type	Value	Form
Potassium permanganate	TWA	1mg/m3 (manganese, inorganic compounds, as Mn: USA: Time-weighted average exposure limit 8 h; TLV-adopted value; inhalable fraction)	ACGIH
	TWA	5mg/m3 as Mn	OSHA PEL

8.2. Appropriate engineering controls

Appropriate engineering controls	: Wash hands before and after use of product. Handle in accordance with good industrial hygiene and safety practice.
Environmental exposure controls	: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eyewash and safety shower should be available in the immediate work area.
General hygiene consideration	: Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated foot wear that cannot be cleaned. Wash contaminated clothing before reuse.

8.3. Individual protection measures/Personal protective equipment

Hand protection:
Chemical resistant, impervious gloves should be worn at all times when handling this product.
Eye protection:
Chemical goggles are recommended.
Skin and body protection:
Wear suitable protective clothing and gloves.
Respiratory protection:
In case of inadequate ventilation use suitable respirator.

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Violet
Odor	: Odorless
Odor threshold	: No data available.
pH	: 7

Component #1 of Reagent #1 and Reagent #2, part of the Tissue-Tek Genie® DAB Cleaning Reagent Kit

Safety Data Sheet

US-SDS according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

Melting point	: No data available.
Freezing point	: No data available.
Boiling point	: No data available.
Flash point	: Not relevant
Relative evaporation rate (butyl acetate=1)	: No data available.
Flammability	: Not flammable
Vapor pressure	: No data available.
Relative vapor density at 20°C	: No data available.
Relative density	: 1 g/cm ³
Solubility	: Miscible with water
Partition coefficient n-octanol/water (Log Pow)	: No data available.
Auto-ignition temperature	: Not relevant
Decomposition temperature	: No data available.
Viscosity, kinematic	: No data available.
Viscosity, dynamic	: No data available.
Explosion limits	: No data available.
Explosive properties	: No data available.
Oxidizing properties	: No data available.

9.2. Other information

No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under recommended storage and use conditions

10.3. Possibility of hazardous reactions

Hazardous polymerization does not occur.

10.4. Conditions to avoid

Incompatible materials. Sunlight.

10.5. Incompatible materials

Strong reducing agents. Strong acids. Strong bases

10.6. Hazardous decomposition products

Manganese, oxygen, fume, carbon monoxide, carbon dioxide

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: LD50 (Rat):11090 mg/kg LD50 (Mouse): Not available. LD50 (Rabbit): Not available.
Acute toxicity (dermal)	: LD50 (Rabbit): Not available.
Acute toxicity (inhalation)	: LC50 (Rat, 1h): Not available. LC50 (Mouse, 2h): Not available
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.

Component #1 of Reagent #1 and Reagent #2, part of the Tissue-Tek Genie® DAB Cleaning Reagent Kit

Safety Data Sheet

US-SDS according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

Respiratory or skin sensitization	: No information available.
Germ cell mutagenicity	: Not classified as germ cell mutagen.
Carcinogenicity	: Not classified as carcinogen.
Reproductive toxicity	: Not classified.
STOT-single exposure	: Not classified.
STOT-repeated exposure	: Not classified.
Aspiration hazard	: Not classified.
Viscosity, kinematic	: Not classified.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Fresh water fish Oncorhynchus mykiss (rainbow trout) 0.3-0.6 mg/L, LC50, 96 h
	Aquatic invertebrates Daphnia magna (water flea) 0.235 mg/L, EC50, 24 h

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods	: Discharge, treatment, or disposal may be subject to national, state, or local laws. Observe all federal, state and local environmental regulations. Since emptied containers retain product residue, follow label warnings even after container is emptied.
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SECTION 14: Transport information

In accordance with DOT / IMDG / IATA

14.1. UN number

Not regulated

14.2. UN proper shipping name

Proper Shipping Name (DOT)	: Not applicable
Proper Shipping Name (IMDG)	: Not applicable
Proper Shipping Name (IATA)	: Not applicable

Component #1 of Reagent #1 and Reagent #2, part of the Tissue-Tek Genie® DAB Cleaning Reagent Kit

Safety Data Sheet

US-SDS according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

14.3. Transport hazard class(es)

DOT
Transport hazard class(es) (DOT) : Not applicable

IMDG
Transport hazard class(es) (IMDG) : Not applicable

IATA
Transport hazard class(es) (IATA) : Not applicable

14.4. Packing group

Packing group (DOT) : Not applicable
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable

14.5. Environmental hazards

Other information : Not applicable

14.6. Special precautions for user

DOT
Potassium Permanganate: DOT reportable quantity: 100lb

IMDG
Potassium Permanganate: Marine Pollutant

IATA
Not applicable

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

No information available.

SECTION 15: Regulatory information

15.1. US Federal regulations

This product is not considered as a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29CFR1910.1200.

Massachusetts RTK: Not a subject to the Massachusetts Right to Know Act

Component	CAS No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity
CERCLA/SARA					
Potassium Permanganate	7722-64-7	Not listed.	Not listed.	Not listed.	Not listed.

Component	CAS No.	CERCLA Hazardous substance and their reportable quantities	Section 302 Extremely hazardous substances and TPQs	Section 302 Extremely hazardous substances and RQs	Section 313 Chemical Category	Section 313 Reporting de minimis
U.S. TSCA						
Potassium Permanganate	7722-64-7	Not applicable	Not applicable	Not applicable	N450 manganese compounds	Does not exceed De minimis

Component	CAS No.	TSCA section 5(a)2- Chemicals with significant new use rules (SNURS)	TSCA 8(d)-Health and safety reporting
Potassium permanganate	7722-64-7	Not applicable	Listed

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Safety Data Sheet

US-SDS according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

15.2. International regulations

Country(s) or Region	Inventory Name	On Inventory (Yes/No)*
Australia	Australian Inventory of Chemical Substances (AICS)	No data available
Canada	Domestic Substances List (DSL)	No data available
Canada	Non-Domestic Substances List (NDSL)	No data available
China	Inventory of Existing Chemical Substances in China (IECSC)	No data available
Europe	European Inventory of Existing Commercial Chemical Substances N	No data available
Europe	European List of Notified Chemical Substances (ELINCS)	No data available
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No data available
Korea	Existing Chemicals List (ECL)	No data available
New Zealand	New Zealand Inventory	No data available
Philippines	Philippine Inventory of Chemicals and Chemical Substances	No data available
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No data available

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

* A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

15.3. US State regulations

US. California Proposition 65: Safe Drinking Water and Toxic Enforcement Act of 1986. Chemicals known to the State of California to Cause Cancer: This product does not contain a chemical requiring a warning under California Prop. 65.

SECTION 16: Other information

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Sakura Finetek USA, Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.