



Tissue-Tek Xpress® Molecular Fixative

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 : Tissue-Tek Xpress® Molecular Fixative
Product code : 7120

1.2. Recommended use and restrictions on use

Tissue-Tek Xpress® Rapid Tissue Processor

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

Flammable liquids	Category 2
Acute toxicity, oral	Category 3
Acute toxicity, dermal	Category 3
Acute toxicity, inhalation	Category 3
Specific target organ toxicity, single exposure	Category 1 (CNS, optic nerve)

2.2. GHS Label elements, including precautionary statements

GHS US labeling



Signal Word

Danger

Hazard Statement

Highly flammable liquid and vapor. Toxic if swallowed. Toxic in contact with skin.
Toxic if inhaled. Causes damage to organs (CNS, optic nerve).

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Precautionary Statement Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Do not breathe mist or vapor.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Immediately call a poison center/doctor.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
Call a poison center/doctor. Rinse mouth.
Wash contaminated clothing before reuse.
In case of fire: Use appropriate media to extinguish.
Keep cool. Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Other hazards which do not result in classification

None known.

2.4. Unknown acute toxicity (GHS US)

None

SECTION 3: Composition/Information on ingredients

3.1. Substances

Mixture

3.2. Mixtures

Name	CAS Number	%
Methanol	67-56-1	Proprietary

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 : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Call a POISON CENTER or doctor/physician.

First-aid measures after skin contact : Take off immediately all contaminated clothing. Rinse skin with water/shower. Get medical advice/attention if you feel unwell. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse.

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- First-aid measures after eye contact : Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
- First-aid measures after ingestion : Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting without advice from poison control center. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

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

Prolonged and repeated exposure to high vapor concentrations, skin absorption or ingestion of methanol may result in visual disturbances, metabolic acidosis, headache, giddiness, nausea, insomnia, gastric disturbance, dizziness, and slow breathing. There have been severe cases reported of blindness, coma and death due to the ingestion of methanol.

4.3. Immediate medical attention and special treatment, if necessary

Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed. Take off immediately all contaminated clothing. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO₂).
Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed. Highly flammable liquid and vapor.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Self-contained breathing apparatus and full protective clothing must be worn in case of fire. In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Keep unnecessary personnel away. Keep people away from and upwind of spill/leak.

6.1.2. For emergency responders

Protective equipment : Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

6.2. Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

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6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Large Spills: Stop the flow of material, if this is without risk. Use water spray to reduce vapors or divert vapor cloud drift. Dike the spilled material, where this is possible. A vapor-suppressing foam may be used to reduce vapors. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.
Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
- Other information : Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water. Never return spills to original containers for re-use.

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 : Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Use only outdoors or in a well-ventilated area.
- Hygiene measures : Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)		
Components	Type	Value
Methanol (CAS 67-56-1)	PEL	260 mg/m ³ 200 ppm

US. ACGIH Threshold Limit Values		
Components	Type	Value
Methanol (CAS 67-56-1)	STEL TWA	250 ppm 200 ppm

US. NIOSH: Pocket Guide to Chemical Hazards		
Components	Type	Value

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Methanol (CAS 67-56-1)	STEL	325 mg/m3
	TWA	250 ppm 260 mg/m3 200 ppm

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Methanol (CAS 67-56-1)	15 mg/l	Methanol	Urine	*
* - For sampling details, please see the source document.				

Exposure guidelines

US - California OELs: Skin designation

Methanol (CAS 67-56-1) Can be absorbed through the skin

US - Minnesota Haz Subs: Skin designation applies

Methanol (CAS 67-56-1) Skin designation applies.

US - Tennessee OELs: Skin designation

Methanol (CAS 67-56-1) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Methanol (CAS 67-56-1) Can be absorbed through the skin.

US. NIOSH: Pocket Guide to Chemical Hazards

Methanol (CAS 67-56-1) Can be absorbed through the skin.

8.2. Appropriate engineering controls

Appropriate engineering controls : Explosion-proof general and local exhaust ventilation. 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. Eye wash fountain and emergency showers are recommended.

8.3. Individual protection measures/Personal protective equipment

Hand protection:
Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
Eye protection:
When working with liquids wear splash-proof chemical goggles and face shield unless full facepiece respiratory protection is worn.
Skin and body protection:
Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended. Wear appropriate thermal protective clothing, when necessary. When using do not smoke. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.
Respiratory protection:
Chemical respirator with organic vapor cartridge and full facepiece.

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Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Colorless
Odor	: Mild
Odor threshold	: Not available.
pH	: 6.4
Melting point	: Not available.
Freezing point	: Not available.
Boiling point	: 142.9 °F (61.61 °C) ASTM D-86
Flash point	: 56.0 °F (13.3 °C) Pensky-Martens Closed Cup (ASTM Method D-93)
Relative evaporation rate (butyl acetate=1)	: Not available.
Flammability	: Not applicable.
Vapor pressure	: ASTM method: 4.17 psi (227.0 mm Hg) CARB equation: 4.03 psi (219.7 mm Hg) EPA method: 4.32 psi (234.7 mm Hg)
Relative vapor density at 20°C	: Not available.
Relative density	: 0.832 @ 60/60°F, ASTM –1298
Solubility	: (Water) Soluble.
Partition coefficient n-octanol/water (Log Pow)	: Not available.
Auto-ignition temperature	: > 878 °F (> 470 °C)
Decomposition temperature	: Not available.
Viscosity, kinematic	: Not available.
Viscosity, dynamic	: Not available.
Explosion limits	: Not explosive.
Explosive properties	: Not explosive.
Oxidizing properties	: Not oxidizing.

9.2. Other information

No information.

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is stable and non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Material is stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.

10.5. Incompatible materials

Strong oxidizing agents. Acids. Amines. Acid chlorides. Alkali metals. Combustibles.

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10.6. Hazardous decomposition products

Thermal decomposition or combustion may produce: carbon oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Toxic if swallowed.
Acute toxicity (dermal)	: Toxic in contact with skin.
Acute toxicity (inhalation)	: Toxic if inhaled. May cause damage to organs by inhalation.
Skin corrosion/irritation	: This product is not expected to cause skin sensitization.
Serious eye damage/irritation	: Direct contact with eyes may cause temporary irritation.
Respiratory or skin sensitization	: Prolonged skin contact may cause temporary irritation. Not a respiratory sensitizer.
Germ cell mutagenicity	: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	: This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
Reproductive toxicity	: Due to inconclusive data the classification is not possible. Methanol has produced fetotoxicity in rats and teratogenicity in mice exposed by inhalation to high concentrations that did not produce significant maternal toxicity. Methanol (CAS 67-56-1) is in the California Proposition 65 list of chemicals as a developmental toxin.
STOT-single exposure	: Causes damage to organs (CNS, optic nerve).
STOT-repeated exposure	: Not classified.
Aspiration hazard	: Not an aspiration hazard.
Chronic effects	: Some studies suggest possible developmental effects based on animal data.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components	Species	Test Results
Methanol (CAS 67-56-1)		
Aquatic		
<i>Acute</i>		
Crustacea EC50	Daphnia magna	> 10000 mg/l, 48 hours
Fish LC50	Bluegill (Lepomis macrochirus)	15400 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

12.2. Persistence and degradability

No data is available on the degradability of this product.

12.3. Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)
Methanol (CAS 67-56-1) -0.77

12.4. Mobility in soil

No data available.

12.5. Other adverse effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

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SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved licensed waste handling site for recycling or disposal.

SECTION 14: Transport information

In accordance with DOT / IMDG / IATA

14.1. UN number

UN1230

14.2. UN proper shipping name

Proper Shipping Name (DOT) : Methanol
Proper Shipping Name (IMDG) : Methanol
Proper Shipping Name (IATA) : Methanol

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT) : 3

IMDG

Transport hazard class(es) (IMDG) : 3

IATA

Transport hazard class(es) (IATA) : 3

14.4. Packing group

Packing group (DOT) : II
Packing group (IMDG) : II
Packing group (IATA) : II

14.5. Environmental hazards

DOT, IMDG, & IATA : Marine pollutant - No

14.6. Special precautions for user

DOT

Read safety instructions, SDS and emergency procedures before handling.

IMDG

Read safety instructions, SDS and emergency procedures before handling.

IATA

Read safety instructions, SDS and emergency procedures before handling.

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

Not established.

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SECTION 15: Regulatory information

15.1. US Federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)		
Not regulated.		
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)		
Not listed.		
CERCLA Hazardous Substance List (40 CFR 302.4)		
Methanol (CAS 67-56-1)	LISTED	
Superfund Amendments and Reauthorization Act of 1986 (SARA)		
Hazard categories	Immediate Hazard - Yes Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No	
SARA 302 Extremely hazardous substance		
Not listed.		
SARA 311/312 Hazardous chemical - Yes		
SARA 313 (TRI reporting)		
Chemical name	CAS number	% by wt.
Methanol	67-56-1	Proprietary

15.2. International regulations

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

*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. Massachusetts RTK - Substance List

Methanol (CAS 67-56-1)

US. New Jersey Worker and Community Right-to-Know Act

Methanol (CAS 67-56-1)

US. Pennsylvania Worker and Community Right-to-Know Law

Methanol (CAS 67-56-1)

US. Rhode Island RTK

Methanol (CAS 67-56-1)

US. California Proposition 65

WARNING: This product can expose you to chemicals including Methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Methanol (CAS 67-56-1)

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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.