Tissue-Tek® Mold Release Concentrate

Safety Data Sheet

US-SDS according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 12/01/2008
Revision date: 10/25/2024 Version: G

SECTION 1: Identification

1.1. Identification

Product form	:	Mixture
Product name	:	Tissue-Tek® Mold Release Concentrate
Product code	:	4141

1.2. Recommended use and restrictions on use

Use with Tissue-Tek® base molds

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

Physical hazards	Flammable liquids Category 2
Health hazards	Acute toxicity, oral Category 4
	Serious eye damage/eye irritation Category 2A
	Specific target organ toxicity, single exposure Category 2 (CNS, optic nerve)
Environmental hazards	Hazardous to the aquatic environment, acute hazard Category 2
	Hazardous to the aquatic environment, Category 2 long-term hazard
OSHA defined hazards	Not classified.

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Signal word	Danger
Hazard statement	Highly flammable liquid and vapor. Harmful if swallowed. Causes serious eye irritation.
	May cause damage to organs (CNS, optic nerve). Toxic to aquatic life with long lasting effects.

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. Avoid release to the environment. Wear protective gloves/eye protection/face protection.

If swallowed: Call a poison center/doctor if you feel unwell. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Call a poison center/doctor. Rinse mouth. If eye irritation persists: Get medical advice/attention. In case of fire: Use appropriate media to extinguish. Collect spillage.

Store in a well-ventilated place. Keep cool. 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 known.

SECTION 3: Composition/Information on ingredients

3.1. Substances

Enter applicable information

3.2. Mixtures

Name	CAS Number	%
Octylphenoxypolyethoxyethanol	9002-93-1	Proprietary
Ethanol	64-17-5	Proprietary
Isopropanol	67-63-0	< 3
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 : Move to fresh air. Call a physician if symptoms develop or persist.

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

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 : Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell.

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

Headache. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
Visual disturbances including blurred vision.

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 all contaminated clothing immediately. 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 (CO_2).
Unsuitable extinguishing media	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.

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. Dike and collect water used to fight fire. Water runoff can cause environmental damage. Avoid discharge into drains, water courses or onto the ground. Use standard firefighting procedures and consider the hazards of other involved materials. Highly flammable liquid and vapor.

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. 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.

6.1.2. For emergency responders

Protective equipment	:	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.

6.2. Environmental precautions

Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.
Inform appropriate managerial or supervisory personnel of all environmental releases.

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. 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. Prevent entry into waterways, sewer, basements or confined areas. 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 : Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

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. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment.

Hygiene measures : 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
Ethanol (CAS 64-17-5)	PEL	1900 mg/m3 1000 ppm
Isopropanol (CAS 67-63-0)	PEL	980 mg/m3 400 ppm
Methanol (CAS 67-56-1)	PEL	260 mg/m3 200 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Ethanol (CAS 64-17-5)	STEL	1000 ppm
Isopropanol (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm
Methanol (CAS 67-56-1)	STEL	250 ppm
	TWA	200 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Ethanol (CAS 64-17-5)	TWA	1900 mg/m3
		1000 ppm
Isopropanol (CAS 67-63-0)	STEL	1225 mg/m3
		500 ppm
	TWA	980 mg/m3
		400 ppm
Methanol (CAS 67-56-1)	STEL	325 mg/m3
		250 ppm
	TWA	260 mg/m3
		200 ppm

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Isopropanol (CAS 67-63-0)	40 mg/l	Acetone	Urine	*
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. Provide eyewash station.

General hygiene considerations : 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.

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:
Wear safety glasses with side shields (or goggles).

Skin and body protection:
Wear suitable protective clothing. Use of an impervious apron is recommended. Wear appropriate thermal protective clothing, when necessary.

Respiratory protection:
Chemical respirator with organic vapor cartridge and full facepiece.

Personal protective equipment symbol(s):

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid.
Color	:	Clear, colorless
Odor	:	Alcohol
Odor threshold	:	Not available
pH	:	Not available
Melting point	:	Not available
Freezing point	:	Not available
Boiling point	:	172.4 °F (78 °C)
Flash point	:	55.4 °F (13.0 °C)
Relative evaporation rate (butyl acetate=1)	:	Not available
Flammability	:	Lower Limit 3.5 % Upper Limit 15 %
Vapor pressure	:	Not available
Relative vapor density at 20°C	:	Not available
Relative density	:	0.99 g/cm3 @ 20 °C
Solubility	:	Complete
Partition coefficient n-octanol/water (Log Pow)	:	Not available
Auto-ignition temperature	:	797 °F (425 °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.
Other	:	VOC (weight) 400g/l

9.2. Other information

No additional 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. Strong acids. Bases. Acetyl chlorides

10.6. Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO_2).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed.

Components	Species	Test Results
Ethanol (CAS 64-17-5)		
LD50	Rat	6.2 g/kg

Acute toxicity (dermal) : Prolonged or repeated skin contact may cause irritation.

Acute toxicity (inhalation) : May cause damage to organs by inhalation. Prolonged inhalation may be harmful.

Components	Species	Test Results
Ethanol (CAS 64-17-5)		
LC50	Rat	20000 ppm, 10 Hours

Skin corrosion/irritation : Prolonged skin contact may cause temporary irritation.

Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitization : Not a respiratory sensitizer. This product is not expected to cause skin sensitization.

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 : May cause damage to organs (CNS, optic nerve).

STOT-repeated exposure : Not classified

Aspiration hazard : Not an aspiration hazard.

Chronic effects : Prolonged inhalation may be harmful.

Symptoms related to the physical, chemical and toxicological characteristics : Headache. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Visual disturbances including blurred vision.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Toxic to aquatic life with long lasting effects.

Components		Species	Test Results
Ethanol (CAS 64-17-5)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia obtusa)	10100 - 11200 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	13480 mg/l, 96 hours
Methanol (CAS 67-56-1)			
Aquatic			
Acute			
Crustacea	EC50	Daphnia magna	> 10000 mg/l, 48 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	15400 mg/l, 96 hours
Octylphenoxypolyethoxyethanol (CAS 9002-93-1)			
Aquatic			
Acute			
Crustacea	LC50	Daphnia magna	>= 44 mg/l, 48 hours
Fish	LC50	Fish	16 mg/kg

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)

Ethanol (CAS 64-17-5) -0.31

Methanol (CAS 67-56-1) -0.77

12.4. Mobility in soil

This product is water soluble and may disperse in soil.

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.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Since emptied containers may retain product residue, follow label warnings even after container is emptied. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

SECTION 14: Transport information

In accordance with DOT / IMDG / IATA

14.1. UN number

Enter available information

14.2. UN proper shipping name

Proper Shipping Name (DOT) : UN1987

Proper Shipping Name (IMDG) : UN1987

Proper Shipping Name (IATA) : UN1987

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

Other information : (DOT) No
(IATA) Yes
(IMDG - Marine Pollutant) Yes

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.

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)	
Ethanol (CAS 64-17-5)	LISTED
Isopropanol (CAS 67-63-0)	LISTED
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.
Isopropanol	67-63-0	<3

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)	No
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
Ethanol (CAS 64-17-5)
Isopropanol (CAS 67-63-0)
Methanol (CAS 67-56-1)

US. New Jersey Worker and Community Right-to-Know Act
Ethanol (CAS 64-17-5)
Isopropanol (CAS 67-63-0)
Methanol (CAS 67-56-1)

US. Pennsylvania Worker and Community Right-to-Know Law
Ethanol (CAS 64-17-5)
Isopropanol (CAS 67-63-0)
Methanol (CAS 67-56-1)

US. Rhode Island RTK
Isopropanol (CAS 67-63-0)
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
Ethanol (CAS 64-17-5)
Methanol (CAS 67-56-1)

SECTION 16: Other information

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

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.