# Tissue-Tek® Xylene (mixed isomers)

Safety Data Sheet

US-SDS according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)
Issue date: 05/05/2020
Revision date: 12/16/2024 Version: B

## SECTION 1: Identification

### 1.1. Identification

| | | |
|---|---|---|
| Product form | : | Mixture |
| Product name | : | Tissue-Tek® Xylene (Mixed Isomers) |
| Product code | : | 5988 |

### 1.2. Recommended use and restrictions on use

General laboratory usage
To be used by qualified personnel only

### 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** | Highly flammable liquid and vapor |
| **Health hazards** | Acute toxicity- Dermal (Category 4) |
| | Acute toxicity- Inhalation (gases) (Category 4) |
| | Acute toxicity- Inhalation (Dusts/mists) (Category 4) |
| | Skin corrosion/irritation (Category 2) |
| | Serious eye damage/eye irritation (Category 2) |
| | Reproductive toxicity (Category 2) |
| | Specific target organ toxicity (single exposure) (Category 3) |
| | Aspiration toxicity (Category 1) |
| | Flammable liquids (Category 3) |
| **Environmental hazards** | Toxic to aquatic life with long lasting effects. |
| | Toxic to aquatic life. |

### 2.2. GHS Label elements, including precautionary statements

**GHS US labeling**

**Hazard symbol**

**Signal word** Warning

**Hazard statement**

Harmful if inhaled.
Harmful in contact with skin
Causes skin irritation
Causes serious eye irritation
Suspected of damaging fertility or the unborn child
May cause respiratory irritation.
May cause drowsiness or dizziness
May be fatal if swallowed and enters airways

**Precautionary statement**

*Prevention* - Obtain special instruction before use.
Do not handle until all safety precautions have been read and understood.
Use personal protective equipment as required
Avoid breathing dust/fume/gas/mist/vapors/spray
Use in well-ventilated area Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Keep away from heat/spark/open flames/hot surfaces.
No smoking Keep container tightly closed
Ground container and receiving equipment
Use explosion -proof equipment
Only use non-sparking tools
Take precautionary measures against static discharge
Avoid release to the environment.
Wear protective gloves/ protective clothing/ eye protection/ face protection.

*Response* - IF SWALLOWED: call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
Do NOT induce vomiting
IF ON SKIN: Wash with plenty of soap and water.
Remove contaminated clothing and wash thoroughly.
Wash contaminated clothing before reuse.
If skin irritation occurs, get medical attention.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call POISON CENTER/doctor if you feel unwell.
IF exposed or concerned, get medical advice/attention.

*Storage* - Keep cool, away from sources of ignition in a well ventilated area. Store locked up

*Disposal* - Incineration at a licensed chemical disposal facility is the preferred method. Dispose of contents and container in accord with all applicable 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 | % |
|---|---|---|
| Xylenes | 1330-20-7 | 77 - 81% |
| Ethyl Benzene | 100-41-4 | 18 - 22% |

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. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.

First-aid measures after skin contact : Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention. If skin irritiation persists, call a physician.

First-aid measures after eye contact : Flush eyes with water for at least 15 minutes. Get medical attention

First-aid measures after ingestion : Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention.

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

The vapor is irritating to nose and throat. Prolonged exposure may cause pulmonary edema. Skin contact causes local defatting of the skin which will cause irritation and chaffing. Long term exposure may cause CNS disturbance and damage to the liver and kidneys.

Inhalation: Irritating to nose and throat. Inhalation of high concentrations can cause CNS disturbance, dizziness, headache, stupor, coma and death. Not normally a problem at ambient temperature.

Ingestion: Although the acute toxicity of xylene is low, ingestion can causes extreme irritation to GI tract. May cause mild to severe pulmonary injury if small amounts are aspirated into the respiratory tract.

Skin contact: Repeated

Eye contact: May be irritating.

Aggravation of preexisting conditions: Impaired kidney and liver function may be aggravated. Preexisting eye, skin, and respiratory conditions may also be aggravated.

### 4.3. Immediate medical attention and special treatment, if necessary

No data available

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Alcohol type foam, carbon dioxide or dry chemical.

Unsuitable extinguishing media : Water is ineffective against xylene fires but may be used to cool adjacent containers.

### 5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Pyrolysis will release toxic oxides such as carbon monoxide

### 5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Wear self-contained breathing apparatus and protective fire-fighting clothing.
Explosion: Vapor is heavier than air and may travel along ground to ignition source.
General fire hazard: TCC Flammable Limits: LEL 1% UEL 6.6%

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures : Wear Personal protective Equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

#### 6.1.2. For emergency responders

Protective equipment : Wear Personal protective Equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

### 6.2. Environmental precautions

Environmental Fate: Not biodegradable. Environmental Toxicity: Toxic to marine organisms. Prevent entry into waterways, sewers, basements or confined areas. Xylene evaporates and is not expected to bioaccumulate. The material is removed from the air by dry and liquid adsorption. The half-life for xylene in the atmosphere is less than one day.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Remove all sources of ignition, absorb with a suitable absorbent (such as paper towels) and dispose

### 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 : Wear lab coat, chemical safety goggles, and gloves. Avoid contact with eyes, skin or clothing. Wash thoroughly after handling. Ground containers, take precautions to prevent static discharge. Remove all sources of ignition.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a cool, well ventilated place. Store in a closed container, away from open flames or other sources of ignition. Store locked up. Keep away from sources of ignition, heat and incompatible materials including any incompatibilities Oxidizing agents, strong acids, strong bases.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

**US. ACGIH Threshold Limit Values**

| Components | Value | Form |
|---|---|---|
| Xylene | 150 ppm (STEL), 100ppm (TWA) | Liquid |
| Ethylbenzene | 125 ppm (STEL), 20ppm (TWA) | |

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

| Components | Value | Form |
|---|---|---|
| Xylene | 100ppm TWA, 435mg/m3 TWA | N/A |
| Ethylbenzene | 100ppm TWA, 435mg/m3 TWA | |

**US. NIOSH: Pocket Guide to Chemical Hazards**

| Components | Value | Form |
|---|---|---|

| | | |
|---|---|---|
| Xylenes | None | N/A |
| Ethylbenzene | 100ppm TWA, 125ppm (STEL) | |

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Handle in accordance with good industrial hygiene and safety practice. Wash hands before and after use of product.

General hygiene considerations : Wash hands before and after use of product. Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke.

### 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 safety goggles/glasses.

**Skin and body protection:**

Appropriate personal protective equipment for the body, foot and any additional skin protection measures should be selected based on the tasks being performed and risks involved. Ventilation System: Usually not required. When required, Refer to the ACGIH document, “Industrial Ventilation, a Manual of Recommended Practices” for details about ventilation.

**Respiratory protection:**

Personal Respirator: Usually not required. In case of emergency, or when exposure levels are unknown, use a positive pressure, full face piece, air supplied 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 | : | Colorless |
| Odor | : | Xylene, aromatic |
| Odor threshold | : | No data available. |
| pH | : | No data available. |
| Melting point | : | -34°C |
| Freezing point | : | -34°C |
| Boiling point | : | 140°C |
| Flash point | : | Flash point: 27°C (80°F) Closed cup |
| Relative evaporation rate (butyl acetate=1) | : | 0.86 |
| Flammability | : | No data available. |
| Vapor pressure | : | 5.1 @ 20C |
| Relative vapor density at 20°C | : | 3.7 |
| Relative density | : | 0.86@ 20°C |
| Solubility | : | Not miscible with water (solubility < 0.08%) |
| Partition coefficient n-octanol/water (Log Pow) | : | No data available. |
| Auto-ignition temperature | : | 460-464°C |
| Decomposition temperature | : | No data available. |
| Viscosity, kinematic | : | No data available. |

| | | |
|---|---|---|
| Density | : | 0.867 g/ml |
| Explosion limits | : | No data available. |
| Explosive properties | : | No data available. |
| Oxidizing properties | : | No data available. |

### 9.2. Other information

No data available.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No data available

### 10.2. Chemical stability

Stable under normal storage and usage conditions

### 10.3. Possibility of hazardous reactions

Hazardous polymerization does not occur

### 10.4. Conditions to avoid

Heat, flame and sources of ignition

### 10.5. Incompatible materials

Oxidizing agents, strong acids, strong bases

### 10.6. Hazardous decomposition products

Carbon dioxide, carbon monoxide, smoke and irritating fumes

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

| | | |
|---|---|---|
| Acute toxicity (oral) | : | Causes digestive (gastrointestinal) tract irritation. Irritating to mouth, throat and stomach. May cause a burning sensation in the mouth, chest, and stomach. Causes gastrointestinal distress. Ingestion may cause nausea, vomiting, diarrhea. Aspiration hazard if swallowed. Aspiration may lead to pulmonary edema. Aspiration into the lungs can cause chemical pneumonitis. May affect the peripheral nervous system (flaccid paralysis without anesthesia (usually neuromuscular blockage)). May affect urinary system (kidneys). May affect liver. May cause metabolic acidosis. It may cause central nervous system depression. |
| Acute toxicity (dermal) | : | Irritating to skin. Moderately irritating to the skin. It may be absorbed through the skin. If absorbed through skin it may cause systemic effects |

| | | |
|---|---|---|
| Acute toxicity (inhalation) | : | Exposure to vapor or mist causes eye irritation. Irritating to respiratory system. May cause dyspnea (difficulty breathing or shortness of breath). May cause respiratory arrest. Symptoms may include chest tightness, coughing. May cause chemical pneumonitis. May cause cyanosis. Inhalation of high concentrations of vapors may cause dizziness or suffocation. Inhalation of high concentrations of vapor may cause anesthetic effects. May cause vasodilation of the peripheral vessels with facial flushing/redness. May produce a sensation of bodily warmth. May affect the cardiovascular system (cardiac arrhythmias). May cause sweet tast in mouth. May cause salivation. May cause dehydration. May cause dry mouth, thirst. May cause dry and sore throat. May cause nausea, vomiting. May cause anorexia. It may affect the liver. May affect the kidneys. May cause metabolic acidosis. May cause hypokalemia, hypobicarbonatemia, and hypophosphatemia. May affect behavior/central nervous system (excitement). May affect behavior/central nervous system (CNS depression, fatigue, irritability, memory loss, seizures, tremor, incoordination, coma). May affect behavior/central nervous system (headache, apprehension, vertigo, confusion drowiness, lassitude, lightheadedness. May affect behavior/central nervous system (slurred speech, difficulty in concentrating). May affect behavior/central nervous system (loss of conciousness, coma). May affect vision (blurred vision). |
| Skin corrosion/irritation | : | Enter information |
| Serious eye damage/irritation | : | Causes eye irritation. Moderately irritating to the eyes. Causes conjunctivitis. May cause transient corneal injury. It may cause transient photophobia and disturbances of vision |
| Respiratory or skin sensitization | : | No data available. |
| Germ cell mutagenicity | : | No data available. |
| Carcinogenicity | : | IARC Monographs. Overall Evaluation of Carcinogenicity<br>Xylene: Group 3<br>Ethylbenzene: Group 2B<br><br>NTP Report on Carcinogens<br>Xylene: Not listed<br>Ethylbenzene: Not listed<br><br>OSHA Specifically Regulated Substances (29 CFR1910.1001-1050)<br>Xylene: Not listed<br>Ethylbenzene: Present |
| Reproductive toxicity | : | Suspected of damaging fertility or the unborn child |
| STOT-single exposure | : | Respiratory system. Central nervous system |
| STOT-repeated exposure | : | No data available. |
| Aspiration hazard | : | Aspiration hazard. May be fatal if swallowed and enters airways. |
| Chronic effects | : | Prolonged skin contact may cause skin irritation. Prolonged or repeated skin contact may cause dermatitis and defatting, dryness, and cracking of the skin. Prolonged or repeated ingestion may cause loss of appetite. Prolonged or repeated ingestion may cause weight loss. Prolonged or repeated inhalation may cause bronchitis with coughing, phlegm, and/or shortness of breath. Prolonged or repeated inhalation may cause nausea. Chronic exposure may cause dry and sore throat. Prolonged or repeated ingestion may affect the liver, and kidneys. Prolonged or repeated ingestion may affect the adrenal gland. Prolonged or repeated ingestion may affect the blood (changes in serum composition). Prolonged or repeated inhalation may affect the liver. Prolonged or repeated inhalation may affect the kidneys. Prolonged or repeated inhalation may affect the brain. Prolonged or repeated inhalation may cause loss of appetite. Prolonged or repeated inhalation may affect metabolism (weight loss). Prolonged or repeated inhalation may affect the peripheral nervous system (weakness, paresthesia - a tingling, prickling, pricking, burning sensation or numbness of the skin (known as the feeling "of pins and needles") generally of the hands and feet (extremities)). Prolonged or repeated inhalation may cause central nervous system effects. Prolonged or repeated inhalation may affect the blood (changes in white blood cell count). Prolonged or repeated inhalation may affect the blood (changes in red blood cell count). Prolonged or repeated inhalation may cause anemia. Prolonged or repeated inhalation may affect the bone marrow (hyperplasia). Chronic exposure to Xylene may be ototoxic (affect hearing). Chronic exposure may cause ringing in the ears (tinnitus). |

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Toxic to marine organisms (Xylene)

### 12.2. Persistence and degradability

Not biodegradable

### 12.3. Bioaccumulative potential

Xylene evaporates quickly and is not expected to bioaccumulate. The material is removed from the air by dry and liquid adsorption.
The half-life for xylene in the atmosphere is less than one day.

### 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 : Incineration at a licensed chemical disposal facility is the preferred method.
Dispose of contents and container in accord with all applicable regulations.
Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

## SECTION 14: Transport information

In accordance with DOT / IMDG / IATA

### 14.1. UN number

UN1307

### 14.2. UN proper shipping name

Proper Shipping Name (DOT) : Xylenes (Mixture)
Proper Shipping Name (IMDG) : Xylenes (Mixture)
Proper Shipping Name (IATA) : Xylenes (Mixture)

### 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) : III
Packing group (IMDG) : III
Packing group (IATA) : III

### 14.5. Environmental hazards

Other information : No information available

### 14.6. Special precautions for user

**DOT**
No information available

**IMDG**
No information available

**IATA**
No information available

### 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

| | |
|---|---|
| **TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)** | Not applicable |
| **OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)** | No information available |
| **CERCLA Hazardous Substance List (40 CFR 302.4)** | Not listed |
| **Superfund Amendments and Reauthorization Act of 1986 (SARA)** | No information available |
| **SARA 302 Extremely hazardous substance** | Not subject to reporting requirements. |
| **SARA 311/312 Hazardous chemical** | Acute: Yes, Chronic: Yes Fire: Yes |
| **SARA 313 (TRI reporting)** | Xylene: 1.0% de minimis concentration<br>Ethylbenzene: 0.1% de minims concentration |

### 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) | Yes |
| China | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes |
| Europe | European List of Notified Chemical Substances (ELINCS) | Yes |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | Yes |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | No data available |
| 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**

Xylene: Present

Ethylbenzene: Present

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

Xylene: 2014, 500 lb TPQ

Ethylbenzene: 0851, 500lb TPQ

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

Xylene: Environmental hazard

Ethylbenzene: Environmental hazard

**US. California Proposition 65**

*WARNING:* This product can expose you to chemicals including Ethylbenzene, which is known to the State of California to cause cancer.

For more information go to www.P65Warnings.ca.gov

## 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.