

## ITSIPREP™ - Material Safety Data Sheet

### 1. Product and Company Information

Trade Name: **Solution 1**  
Cat #: K-0017.1  
Company: ITSI-Biosciences, LLC  
633 Napoleon Street,  
Johnstown, PA 15901  
Phone: 814-262-7331  
Fax: 814-262-7334

### 2. Composition, Information on Ingredients

Name	CAS #	%
Xylene	1330-20-7	100

### 3. Hazards Identification

Emergency Overview: Flammable. Harmful. Harmful by inhalation and in contact with skin.  
Irritating to skin. Risk of serious damage to eyes.

Target Organs: Liver and Kidneys.

HMIS Rating

Health: 2\*                      Flammability: 3                      Reactivity: 0

NFPA Rating

Health: 2                      Flammability: 3                      Reactivity: 0

\*Additional chronic hazards present.

### 4. First Aid Measures

After Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Get medical attention.

After Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. If irritation develops, get medical attention.

After Ingestion: If individual is conscious and alert, give water. Never give anything by mouth to an unconscious individual. Get medical attention.

After Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

### 5. Fire Fighting Measures

Flammable Hazards: Yes  
Explosion Hazards: Container explosion may occur under fire conditions. May form explosive mixtures with air.

Flash Point: 77°F  
25°C

Explosive Limits: Lower: 1.1%  
Upper: 7%

Autoignition Temp.: 464°C

Flammability: Yes

Suitable Extinguishing Agents: Carbon dioxide, dry chemical powder, or appropriate foam.

Unsuitable Extinguishing Agents: Water may be effective for cooling, but may not effect

extinguishments.

Protective Equipment: Wear appropriate protective equipment and self-contained breathing apparatus with a full face piece operated in positive pressure mode.

Specific Hazard(s): Flammable liquid. Vapor may travel considerable distance to source of ignition and flash back. Emits toxic fumes under fire conditions.

Specific Method(s) of Fire Fighting: Use water spray to cool fire-exposed containers.

## 6. Accidental Release Measures

Personal Precautions: Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

Methods for Cleaning: Cover with dry-lime, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

Procedure to be followed in case of leak or spill: Evacuate area. Shut off all sources of ignition. Use nonsparking tools.

## 7. Handling and Storage

Handling: Do not ingest. Do not get in eyes, on skin or on clothing. Keep container closed. Use only with adequate ventilation. Do not breathe vapor or mist. Wash thoroughly after handling. Avoid prolonged or repeated exposure.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area away from incompatible substances. Keep away from heat, sparks, and open flame.

## 8. Exposure Controls, Personal Protection

Engineering Controls: Safety shower and eye bath. Use nonsparking tools. Mechanical exhaust Required.

Personal Protection:

Eyes: Wear appropriate safety eyewear complying with approved standards to avoid exposure to liquid splashed, mists or dusts.

Skin: Wear appropriate chemical-resistant gloves and clothing complying with approved standards to avoid exposure to the skin.

Respiratory: Wear properly fitted respirator complying with approved standards when necessary.

General Hygiene Measures: Wash thoroughly after handling.

Exposure Limits:

<u>Country</u>	<u>Type</u>	<u>Value</u>
Poland	NDS	100 MG/M3
Poland	NDSCh	350 MG/M3
Poland	NDSP	Not Available

Exposure Limits, RTECS:

<u>Country</u>	<u>Source</u>	<u>Type</u>	<u>Value</u>
USA	ACGIH	STEL	150 PPM
USA	ACGIH	TWA	100 PPM
USA	OSHA	PEL	8H TWA 100 PPM (435 MG/M3)
New Zealand	OEL		
Remarks: check ACGIH TLV			
USA	NIOSH	TWASTEL	100 PPM 150 PPM

## 9. Physical and Chemical Properties

Physical State: Liquid

Color:	Colorless
Molecular Weight:	106.17 AMU
pH:	Not Available
BP/BP Range:	136-140°C
MP/MP Range:	Not Available
Freezing Point:	Not Available
Vapor Pressure:	18 mmHg
Vapor Density:	3.7 g/l
Saturated Vapor Conc.:	Not Available
SG/Density:	0.865 g/cm <sup>3</sup>
Bulk Density:	Not Available
Odor threshold:	Not Available
Volatile%:	Not Available
VOC Content:	Not Available
Water Content:	Not Available
Solvent Content:	Not Available
Evaporation Rate:	Not Available
Viscosity:	Not Available
Partition Coefficient:	Not Available
Decomposition Temp.:	Not Available
Flash Point °F:	77°F
Flash Point °C:	25°C
Exposure Limits:	Lower: 1.1% Upper: 7%
Flammability:	Not Available
Autoignition Temp.:	464°C
Refractive Index:	1.497
Solubility:	Not Available

## 10. Stability and Reactivity

Stability:

Stable

Materials to Avoid:

Strong oxidizing agents.

Hazardous Decomposition Products:

Carbon monoxide and carbon dioxide.

Hazardous Polymerization:

Will not occur.

## 11. Toxicological Information

Route of Exposure

Skin Contact:	Causes skin irritation.
Skin Absorption:	Harmful if absorbed through skin.
Eye Contact:	Causes eye irritation.
Inhalation:	Harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
Ingestion:	May be harmful if swallowed.

Target Organ(s) or System(s): Nerves. Liver. Kidneys. Blood. Ears. Heart. Bone marrow.

Signs and Symptoms of Exposure

Exposure Can Cause: CNS depression. Dermatitis. Anorexia. Dyspnea. Bronchitis. Tremors. Blurred vision. Incoordination. Headache. Nausea. Vomiting. Dizziness. Weakness. Anemia. Prolonged or repeated exposure to skin causes defatting and dermatitis.

RTECS Number: ZE2100000

#### Toxicity Data

Oral-Human: 50 mg/kg (LDLO)  
 Inhalation-Man: 10,000 ppm (LCLO)  
 Remarks: Behavioral: General anesthetic; Lungs, Thorax, or Respiration: Cyanosis; Blood: Other Changes.

Oral-Rat: 4300 mg/kg(LD50)  
 Remarks: Liver: Other Changes; Kidney, Ureter, Bladder: Other Changes.

Inhalation-Rat: 5,000 ppm (LC50)  
 Intraperitoneal-Rat: 2,459 MG/KG (LD50)  
 Subcutaneous-Rat: 1,700 MG/KG (LD50)  
 Oral-Mouse: 2,119 mg/kg (LD50)  
 Intraperitoneal-Mouse: 1,548 MG/KG (LD50)  
 Skin-Rabbit: >1,700 mg/kg (LD50)  
 Oral-Mammal: 4,300 mg/kg (LD50)  
 Inhalation-Mammal: 30,000 mg/m3 (LD50)

#### Irritation Data

Eyes-Human: 200 ppm  
 Skin-Rabbit: 100%  
 Remarks: Moderate irritation effect.

Skin-Rabbit: 500 mg 24H  
 Remarks: Moderate irritation effect.

Eyes-Rabbit: 87 mg  
 Remarks: Mild irritation effect.

Eyes-Rabbit: 5 mg 24H  
 Remarks: Severe irritation effect.

#### Chronic Exposure-Carcinogen

Result: This product is or contains a component that is not classified as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

#### IARC Carcinogen List

Rating: Group 3

#### ACGIH Carcinogen List

Rating: A4

#### Chronic Exposure-Teratogen

Species	Dose	Route of Application	Exposure Time
Rat	250 MG/M3/24H	Inhalation	(7-15D PREG)
Result:	Specific Developmental Abnormalities: Musculoskeletal system.		
Rat	50 MG/M3/6H	Inhalation	(1-21D PREG)
Result:	Specific Developmental Abnormalities: Musculoskeletal system.; Specific Developmental Abnormalities: Other developmental abnormalities; Effects on Newborn: Growth statistics (e.g., reduced weight gain).		
Rat	200 PPM/6H	Inhalation	(4-20D PREG)
Result:	Specific Developmental Abnormalities: Musculoskeletal system; Effects on Newborn: Behavioral.		
Mouse	20,600 UG/KG	Oral	(6-15D PREG)

	Result:	Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus); Specific Developmental Abnormalities: Craniofacial (including nose and tongue); Specific Developmental Abnormalities: Musculoskeletal system.	
Mouse	2,000 PPM/6H	Inhalation	(6-12D PREG)
Mouse	Result:	Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).	
	1 GM/M3/12H	Inhalation	(6-15D PREG)
Rabbit	Result:	Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus); Specific Developmental Abnormalities: Musculoskeletal system.	
	500 MG/M3/24H	Inhalation	(7-20D PREG)
	Result:	Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).	

## Chronic Exposure-Reproductive Hazard

<u>Species</u>	<u>Dose</u>	<u>Route of Application</u>	<u>Exposure Time</u>
Rat	50 MG/M3/6H	Inhalation	(1-21D PREG)
	Result:	Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants); Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus); Specific Developmental Abnormalities: Craniofacial (including nose and tongue).	
Mouse	31 MG/KG	Oral	(6-15D PREG)
	Result:	Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).	
Mouse	4,000 PPM/6H	Inhalation	(6-12D PREG)
	Result:	Effects on Newborn: Growth statistics (e.g., reduced weight gain); Effects on Newborn: Physical.	
Rabbit	1 GM/M3/24H	Inhalation	(7-20D PREG)
	Result:	Effects on Fertility: Abortion.	

**12. Ecological Information**

No data available.

**13. Disposal Consideration**

Appropriate Method of Disposal of Substance or Preparation:

Contact a licensed professional waste disposal service to dispose of this material. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

**14. Transport Information**

DOT

Proper Shipping Name:	Xylenes
UN#:	1307
Class:	3
Packing Group:	Packing Group III
Hazard Label:	Flammable liquid
PIH:	Not PIH

IATA

Proper Shipping Name:	Xylenes
IATA UN Number:	1307
Hazard Class:	3
Packing Group:	III

**15. Regulatory Information**

EU Directives Classification

Symbol of Danger:	Xn
Indication of Danger:	Harmful

Risk Statements:	R: 10 20/21 38 Flammable. Harmful by inhalation and in contact with skin. Irritating to skin.
Safety Statements:	S: 25 Avoid contact with eyes.
US Classification and Label Text	
Indication of Danger:	Flammable. Harmful
Risk Statements:	Harmful by inhalation and in contact with skin. Irritating to skin. Risk of serious damage to eyes.
Safety Statements:	Keep away from sources of ignition-no smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.
US Statements:	Target Organs are the liver and kidneys.
United States Regulatory Information	
SARA Listed:	Yes
Deminimis:	1%
Notes:	This product is subject to SARA section 313 reporting requirements.
TSCA Inventory Item:	Yes
Canada Regulatory Information	
WHMIS Classification:	This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL:	Yes
NDSL:	No

## 16. Other Information

The information contained herein is believed to be accurate and represents the best information currently available to us. The supplier does not assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution.

## **ITSIPREP™ - Safety Statement**

### **1. Product and Company Information**

Trade Name: **Solution 2**  
Cat #: K-0017.2  
Company: ITSI-Biosciences, LLC  
633 Napoleon Street  
Johnstown, PA 15901  
Phone: 814-262-7331  
Fax: 814-262-7334

### **2. Composition, Information on Ingredients**

Substance

**This substance/preparation is not classified as hazardous.**

This product does not contain any hazardous ingredients.

### **9. Physical and Chemical Properties**

Clear Liquid

### **16. Other Information**

The information contained herein is believed to be accurate and represents the best information currently available to us. The supplier does not assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution.

This is not an MSDS.

**ITSIPREP™ - Material Safety Data Sheet****1. Product and Company Information**

Trade Name: **Solution 3**  
 Cat #: K-0017.3  
 Company: ITSI-Biosciences, LLC  
 633 Napoleon Street,  
 Johnstown, PA 15901  
 Phone: 814-262-7331  
 Fax: 814-262-7334

**2. Composition, Information on Ingredients**

Name	CAS #	%
Tris (hydroxymethyl) Aminomethane Free Base	77-86-1	<1.0
Sodium Dodecyl Sulfate	151-21-3	2.0
Water	7732-18-5	>97

**3. Hazards Identification**

Physical State: Liquid  
 Emergency Overview: May cause eye, skin, and respiratory tract irritation.  
 Target Organs: Lungs.  
 Potential Health Effects: Harmful if in contact with skin and if swallowed.  
 Eyes: Causes eye irritation.  
 Skin: May cause skin irritation.  
 Ingestion: May cause gastrointestinal irritation.  
 Inhalation: May cause respiratory tract irritation.

**4. First Aid Measures**

After Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.  
 After Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. If irritation develops, get medical attention.  
 After Ingestion: If individual is conscious and alert, give water. Never give anything by mouth to an unconscious individual. Get medical attention.  
 After Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**5. Fire Fighting Measures**

Suitable Extinguishing Agents: CO<sub>2</sub>, extinguishing powder or water spray or chemical foam.  
 Protective Equipment: Wear appropriate protective equipment and self-contained breathing apparatus with a full face piece operated in positive pressure mode.

**6. Accidental Release Measures**

Personal Precautions: Use suitable protective equipment.  
 Methods for Cleaning: Absorb spills with liquid-binding material and place in an appropriate disposal container.

**7. Handling and Storage**

Handling: Do not ingest. Do not get in eyes, on skin or on clothing. Keep container closed. Use only with adequate ventilation. Do not breathe vapor or mist. Wash thoroughly after handling.



Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area away from incompatible substances.

### 8. Exposure Controls, Personal Protection

Engineering Controls: Access to a safety shower and eye-wash.

Personal Protection:

Eyes: Wear appropriate safety eyewear complying with approved standards to avoid exposure to liquid splashed, mists or dusts.

Skin: Wear appropriate protective gloves and clothing to avoid exposure to the skin.

Respiratory: Wear properly fitted respirator complying with approved standards when necessary.

Exposure Limits:

Name	ACGIH	NIOSH	OSHA
Tris (hydroxymethyl) Aminomethane Free Base	None Listed	None Listed	None Listed
Sodium Dodexyl Sulfate	None Listed	None Listed	None Listed
Water	None Listed	None Listed	None Listed

### 9. Physical and Chemical Properties

Physical State: Liquid  
 Color: Clear  
 Odor: Not Available  
 pH: 7.0-9.0  
 Vapor Pressure: Not Available  
 Vapor Density: Not Available  
 Evaporation Rate: Not Available  
 Viscosity: Not Available  
 Boiling Point: Not Available  
 Freezing/Melting Point: Not Available

### 10. Stability and Reactivity

Stability: Stable

Incompatibility with Various Substances:

Oxidizing agents and mineral acids.

Hazardous Decomposition Products:

Nitrogen Oxides, sulfur dioxide, carbon monoxide and carbon dioxide.

Hazardous Polymerization:

Will not occur.

### 11. Toxicological Information

Name	Test	Result	Route	Species
Tris (hydroxymethyl) Aminomethane Free Base	LD50	5900 mg/kg	Oral	Rat
Sodium Dodexyl Sulfate	LD50	1288 mg/kg	Oral	Rat
Water	LD50	>90 ml/kg	Oral	Rat

Carcinogenicity: Not listed by ACGIH, IARC, NIOSH, NTP or OSHA

### 12. Ecological Information

For Sodium Dodecyl Sulfate:

Physical properties affecting ecotoxicity: COD 95.1%; BOD 95.9%

Acute ecotoxicity tests: LC50 Rainbow Trout—96hrs; 3.6mg/ml

**13. Disposal Consideration**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste and must consult local and state waste regulations to comply with all requirements.

**14. Transport Information**

No information available.

**15. Regulatory Information**

U.S. Federal Regulations:

TSCA: All of the chemicals are listed on the TSCA inventory.  
Health and Safety Reporting List: none of the chemicals are listed.  
Chemical Test Rules: none of the chemicals are listed.  
Section 12b: none of the chemicals are listed.  
SNUR: none of the chemicals are listed.

SERA:

CERCLA Hazardous Substances and corresponding RQS:

Not Available.

Section 302 Extremely Hazardous Substances:

None of the chemicals have a TPQ

SARA Codes:

Urea: Immediate – acute, delayed - chronic

Section 313:

None of the chemicals are reported.

Clean Air Act:

None of the chemicals contain any hazardous air pollutants, Class 1 or

Class 2 Ozone depletors.

Clean Water Act:

None of the chemicals are listed as Priority Pollutants or Toxic Pollutants under the CWA.

OSHA:

None of the chemicals are considered highly hazardous by OSHA.

**16. Other Information**

The information contained herein is believed to be accurate and represents the best information currently available to us. The supplier does not assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution.