



## Transformation and Storage Solution (TSS)

Prepared according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations  
Revision date:04/18/2019 Version: 05

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product Identifier

Product name 2X TSS (Transformation and Storage Solution)  
Product form Mixture  
Product # TSS-BTK-201

#### 9.1 Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture: Laboratory reagent for *in vitro* research use only

#### 1.3 Details of the supplier of the safety data sheet

Amid Biosciences LLC  
3108 Patrick Henry Drive  
Santa Clara, CA 95054 USA  
Phone: 1-650-237-0558  
E-mail: [info@amidbiosciences.com](mailto:info@amidbiosciences.com)

#### 1.4 Emergency telephone number:

1-650-237-0558 (Amid Biosciences: Monday-Friday, 8:00 AM-5:00 PM)

### SECTION 2: Hazards Identification

#### 2.1 Classification of the substance or mixture

#### 2.2 Classification (GHS-US)

Not classified

#### 2.3 Label elements

##### GHS-US labeling

No labeling applicable

#### 2.4 Other hazards

Other hazards not contributing to the classification:

None under normal conditions

#### 2.5 Unknown acute toxicity (GHS-US)

### SECTION 3: Composition/information on ingredients

#### 3.1 Substance

Salts and non-animal origin media components in solution for use in the growth of bacterial cultures.

#### 3.2 Mixture

Name	CAS #	Weight %
Dimethylsulfoxide (CAS# 67-68-5)	67-68-5	10
Water	7732-18-5	
Polyethylene oxide	25322-68-3	20
Tryptone		1.6
Magnesium chloride	7786-30-3	0.5 - 1
Yeast extract	8013-01-2	1.8
Trade secret	Proprietary	1 - 5
Contains no other hazardous ingredients at levels requiring disclosure by the OSHA Hazard Communication Standard (29 CFR 1910.1200).		



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**SECTION 4: First aid measures**

**4.1 Description of first aid measures:**

First-aid measures general:

never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation:

remove to fresh air and keep at rest in a position comfortable for breathing.

First-aid measures after skin contact:

IF ON SKIN (or clothing), remove affected clothing and wash all exposed skin with water for at least 15 minutes. If irritation persists, call a physician.

First-aid measures after eye contact:

IF IN EYES: Immediately flush with plenty of water for at least 15 minutes. Obtain medical attention if pain, blinking or redness persists.

First-aid measures after ingestion:

IF SWALLOWED: Immediately give large amounts of water. Do NOT induce vomiting.

**4.2 Most important symptoms and effects, both acute and delayed**

Symptoms/injuries:

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

Symptoms/injuries after inhalation:

May cause respiratory irritation.

Symptoms/injuries after skin contact:

May cause skin irritation.

Symptoms/injuries after eye contact:

May cause slight temporary irritation.

Symptoms/injuries after ingestion:

May cause gastrointestinal irritation.

Chronic symptoms:

No data available.

**4.3 Indication of any immediate medical attention and special treatment needed**

No additional information available

**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

Suitable extinguishing media:

Foam. Dry powder. Carbon dioxide. Water spray.

**5.2 Special hazards arising from the substance or mixture**

Fire hazard:

Product is not flammable.

Explosion hazard:

Product is not explosive.

Reactivity:

No dangerous reactions known under normal conditions of use.

**5.3. Advice for firefighters**

Firefighting instructions:

Use water spray or fog for cooling exposed containers.

Protection during firefighting:

Exercise caution when fighting any chemical fire.

General measures:

Do not dispose of fire-fighting water in the environment.

Protection during firefighting:

Do not enter fire area without proper protective equipment, including respiratory protection.

**SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

General measures:

No specific emergency measures are required other than good. Laboratory hygiene and safety practices.

**6.1.1 For non-emergency personnel**

Protective equipment:

Wear Protective equipment as described in Section 8.

Emergency procedures:

Evacuate unnecessary personnel.

**6.1.2 For emergency responders**

Protective equipment:

Wear suitable protective clothing, gloves and eye or face protection. Approved supplied-air respirator, in case



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of emergency.

### 6.2 Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

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

For containment:

Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up:

Take up liquid spill into inert absorbent material, e.g.: sand, earth, vermiculite. Sweep or shovel spills into appropriate container for disposal. This material and its container must be disposed of in a safe way, and as per local legislation.

### 6.4 Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling:

Precautions for safe handling:

Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

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

Storage conditions: Keep container tightly closed in a cool, dry, and well-ventilated place.

### 7.3 Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

No information on mixture available

### 8.2 Exposure controls

Appropriate engineering controls:

Personal protective equipment:

Hand protection:

Ensure adequate ventilation, especially in confined areas. Gloves. Protective goggles.

Use gloves chemically resistant to this material when prolonged or repeated contact could occur. Gloves should be classified under Standard EN 374 or ASTM F1296.

Suggested glove materials are: Natural rubber ("latex"), Neoprene, Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol Laminate, PVC or vinyl.

Chemical goggles or safety glasses.

Eye protection:

Wear suitable protective clothing. Wear long sleeves.

Skin and body protection:

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties of pure Glycerol. Information on mixture not available.

Physical state:	Liquid
Color:	Yellow
Odor:	Odorless
Odor Threshold:	No data available
pH:	7
Relative evaporation rate (butyl acetate=1):	No data available
Melting point:	No data available
Freezing point:	No data available
Boiling point:	No data available
Flash point:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Flammability (solid, gas):	No data available



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Vapor pressure:	No data available
Relative vapor density at 20 °C:	No data available
Relative density:	No data available
Solubility:	No data available
Log Pow:	No data available
Log Kow:	No data available
Viscosity, kinematic:	No data available
Viscosity, dynamic:	No data available
Explosive properties:	No data available
Oxidizing properties:	No data available
Explosive limits:	No data available

### 9.2 Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No dangerous reactions known under normal conditions of use.

### 10.2 Chemical stability

Stable under recommended handling and storage conditions (see section 7).

### 10.3 Possibility of hazardous reactions

None known.

### 10.4 Conditions to avoid

None known.

### 10.5 Incompatible materials

Dimethyl sulfate, Acid chlorides, Halogenated hydrocarbon, Metals, Acids, Heavy metals

### 10.6 Hazardous decomposition products

Thermal decomposition generates: Carbon oxides (CO, CO<sub>2</sub>)

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Routs of entry

Eye contact. Inhalation. Ingestion.

Toxicity to animal: Dimethyl sulfoxide:

Oral LD50 > 11000 mg/kg (guinea pig)

Oral LD50 7920 mg/kg (mouse)

Oral LD50 >14500 mg/kg (rat)

Toxicity to human:

Acute toxicity:

Not classified

Skin corrosion/irritation:

May cause skin irritation

Serious eye damage/irritation:

May cause eye irritation

Respiratory or skin sensitization:

May be harmful when inhaled. Material may be irritating to mucus membranes and upper respiratory tract.

Germ cell mutagenicity:

No data available

Carcinogenicity:

No data available

Reproductive toxicity:

No data available

Specific target organ toxicity (single exposure):

May cause skin irritation

Specific target organ toxicity (repeated exposure):

May cause skin irritation

Aspiration hazard:

May be harmful when inhaled. Material may be irritating to mucus membranes and upper respiratory tract

Symptoms/injuries after inhalation:

Irritation to respiratory tract

Symptoms/injuries after skin contact:

Irritation (redness) to skin

Symptoms/injuries after eye contact:

Irritation to eye

Symptoms/injuries after ingestion:

May cause gastrointestinal irritation

Chronic symptoms:

No data available

## SECTION 12: Ecological information

### 12.1 Toxicity

No additional information available

### 12.2 Persistence and degradability

Persistence and degradability:

Not established

### 12.3 Bioaccumulative potential



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No additional information available

### 12.4 Mobility in soil

No additional information available

### 12.5 Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Waste treatment methods:

Product:

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging:

Dispose of as unused product.

## SECTION 14: Transport information

In accordance with DOT, IATA, IMO, RID/ADR:

Not hazardous for transport

### Additional information

Other information:

No supplementary information available

### Transport by sea

No additional information available

### Air transport

No additional information available

## SECTION 15: Regulatory information

### 15.1 US Federal Regulations

#### SARA 302 Components

**SARA 302:** No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

#### SARA 313 Components

**SARA 313:** This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

#### SARA 311/312 Hazards

No SARA Hazards

### 15.2 International regulations

#### CANADA

No additional information available.

#### EUROPEAN REGULATIONS

European Labeling in accordance with EC

Regulations:

Hazard Symbols:

None

Risk Phrases:

None

Safety Phrases:

24/25, Avoid contact with skin and eyes.

### 15.3 US State regulations

#### California Proposition 65

This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

U.S. - Massachusetts

No components are subject to the Massachusetts Right to Know Act.

U.S. - New Jersey

Non hazardous component(s) liquid

U.S. - Pennsylvania

Non hazardous component(s) liquid

## SECTION 16: Other information

Indication of changes:

Revision 1.0: New MSDS Created.

Revision date:

04/18/2019

Other information:

None

NFPA health hazard:

1-Exposure under fire conditions would offer no hazard



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NFPA fire hazard:

NFPA reactivity:

beyond that of ordinary combustible materials.

1-Materials that will not burn.

1-Normally stable, even under fire exposure conditions, and are not reactive with water.

### HMIS III Rating

Health:

1

Flammability:

1

Physical:

1

This information is disclosed to the best of Amid Biosciences' knowledge. This document does not constitute a contractual relationship with product end users or handlers with respect to the possible presence of hazards in this item. Disposal should be in accordance with applicable regional, national and local laws and regulations.