

Safety Data Sheet

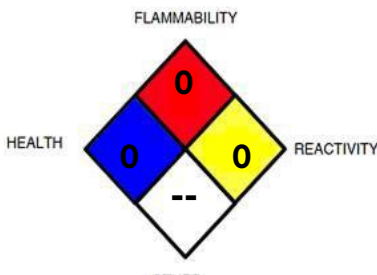
Section 1: Product & Company Identification

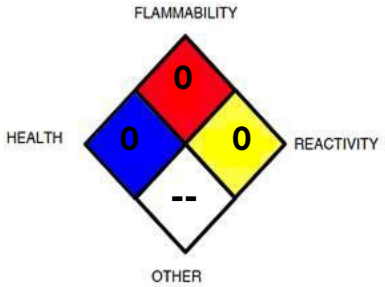
Product Name:	TGS Buffer 10X Solution
Product #:	T-2711
Synonyms:	TRIS-Glycine-SDS
Supplier:	AG Scientific Holdings, LLC 9950 Scripps Lake Drive, Suite 104 San Diego, CA 92131 Tele# + 858-452-9925
Emergency Tele#:	ChemTel, Tele# in USA 1-800-255-3924, International 1-813-248-0585

Section 2: Composition / Information on Ingredients

Component	CAS #	EC #	Concentration
Water	7732-18-5		Q. S
Tris Base/Tris HCl	77-86-1/1185-53-1		250 mM
Glycine	56-40-6		1.92 M
SDS	151-21-3		1%

Section 3: Hazards Identification

Symbols	N/A
HMIS Classification	 <p>The diagram is a diamond shape divided into four quadrants. The top quadrant is red and labeled 'FLAMMABILITY' with a '0'. The left quadrant is blue and labeled 'HEALTH' with a '0'. The right quadrant is yellow and labeled 'REACTIVITY' with a '0'. The bottom quadrant is white and labeled 'OTHER' with '--'.</p>

NFPA Classification	 <p>The diagram is a diamond-shaped hazard diamond. The top vertex is red and contains the number '0'. The left vertex is blue and contains the number '0'. The right vertex is yellow and contains the number '0'. The bottom vertex is white and contains the text '--'. The diamond is labeled 'FLAMMABILITY' at the top, 'HEALTH' on the left, 'REACTIVITY' on the right, and 'OTHER' at the bottom.</p>
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Section 4: First Aid Measures

General Overview:	Consult a doctor and show this safety data sheet.
Inhalation:	Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.
Skin:	Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor.
Eyes:	Flush with copious amounts of water for at least 15 minutes. Consult a doctor.
Ingestion:	Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor.
	See section 11 for more detailed information on health effects & symptoms.

SECTION 5: Fire Fighting Measures

Flammability of the product:	No data available
Extinguishing Media:	Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.
Hazardous thermal (de)composition products:	No data available
Special Fire Fighting Procedures:	Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus.
Flash Point:	No data available

Section 6: Accidental Release Measures




Personal Precautions:	Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust, or gas.
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Environmental Precautions:	Do not let product enter drains.
Methods for Clean-up:	Cover spillage with suitable absorbent material. Using non-spark tools, sweep up material and place in an appropriate container. Decontaminate spill site with 10% caustic solution and ventilate area until after disposal is complete. Hold all material for appropriate disposal as described under section 13 of SDS.

SECTION 7: Handling & Storage

Storage:	Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use. Keep in a dry place. Store at room temperature.
Handling:	Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.

SECTION 8: Exposure controls / Personal Protection

Respiratory Protection:	 <p>Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.</p>
Skin and Body:	  <p>Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Wear appropriate protective clothing. Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.</p>

Eyes:	 <p>Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).</p>
Ventilation/Engineering Measures:	Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
Hygiene:	Handle in accordance with good industrial hygiene and safety practice.
Other:	Contains no substances with occupational exposure limit values.

SECTION 9: Physical and Chemical Properties

Appearance & Odor:	Liquid
Formula	N/A
Molecular Wt.	N/A
Melting Pt.	No data available
Boiling Pt.	No data available
pH:	8.25 - 8.55
Density:	No data available
Vapor Pressure:	No data available
Evaporation Rate:	No data available
Vapor Density:	No data available
Solubility:	Water
Flash Point:	No data available
Autoignition Temp:	No data available

SECTION 10: Stability and Reactivity

Stability:	Stable under recommended storage conditions.
Hazardous decomposition products:	No data available
Materials to Avoid:	Strong oxidizing agents, Bases
Conditions to avoid:	No data available

SECTION 11: Toxicological Information

RTECS#:	LD50 Oral = 1,288 mg/kg (Rat) LD50 Dermal = 580 mg/kg (Rabbit) LD50 Inhalation = 3,900 mg/m ³ (Rat) 1 h
ACUTE Toxicity:	N/A
CHRONIC Toxicity:	N/A
Chronic Exposure: Carcinogen: Mutagen: Teratogen: Reproductive:	IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible, or confirmed human carcinogen by IARC. AGGIH: No component of this product present at levels greater than or equal to 0.1% is identified as probable, potential human carcinogen by ACGIH. NTP: No component of this product present at levels greater than or equal to 0.1% is identified as known or anticipated human carcinogen by NTP. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as known or potential human carcinogen by OSHA. EPA: No classification on carcinogenic data is available from EPA

SECTION 12: Ecological Information

Ecotoxicity:	<p>Toxicity to Fish:</p> <p>LC50 15-18.9 mg/L Pimephales promelas 96 h LC50 4.06-5.75 mg/L Lepomis macrochirus 96 h LC50 4.2-4.8 mg/L Lepomis macrochirus 96 h LC50 6.2-9.6 mg/L Pimephales promelas 96 h LC50= 4.2 mg/L Oncorhynchus mykiss 96 h LC50 13.5-18.3 mg/L Poe cilia reticulate 96 h LC50 5.8-7.5 mg/L Pimephales promelas 96 h LC50 9.9-20.1 mg/L Brachydanio rerio 96 h LC50 10.2-22.5 mg/L Pimephales promelas 96 h LC50 8-12.5 mg/L Pimephales promelas 96 h LC50= 4.5 mg/L Lepomis macrochirus 96 h LC50= 4.62 mg/L Oncorhynchus mykiss 96 h LC50 10.8-16.6 mg/L Poe cilia reticulate 96 h LC50 22.1-22.8 mg/L Pimephales promelas 96 h LC50 4.3-8.5 mg/L Oncorhynchus mykiss 96 h LC50= 1.31 mg/L Cyprinus carpio 96 h LC50= 7.97 mg/L Brachydanio rerio 96 h</p> <p>Toxicity to Algae:</p> <p>EC50 = 3.59 - 15.6 mg/L 96 h EC50 = 117 mg/L 96 h EC50 = 53 mg/L 72 h EC50 = 30 - 100 mg/L 96 h</p>
Mobility:	No data available

Persistence and degradability:	No data available
Bioaccumulative potential:	No data available
Other adverse effects:	No data available
Corrosivity Characteristic:	No data available
General Notes:	To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

SECTION 13: Disposal Considerations

Residue Waste or Unused product:	Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations.
Contaminated Packaging:	Dispose of container and unused contents in accordance with federal, state and local requirements.

SECTION 14: Transportation Information

UN ID#:	N/A
ADR / RID (LAND):	Not regulated
DOT regulations:	Not regulated
IMDG/IMO (SEA):	Not regulated
IATA/DGR (AIR):	Not regulated
Special Provisions:	N/A

SECTION 15: Regulatory Information

Health Phrases:	Not hazardous
Risk Phrases:	P101 If medical advice is needed, have product container or label at hand P102 Keep out of reach of children. P501 Dispose of contents/ container to an approved waste disposal plant
Safety Phrases:	N/A
EU Regulations:	N/A
US Regulations:	TSCA: Not listed California Proposition 65: No products were found New Jersey State Right to Know: Listed Pennsylvania State Right to Know: Listed
U.S. Federal Regulations:	SARA 302/304 emergency planning and notification: No products were found. SARA 311/312 MSDS distribution-chemical inventory-hazard identification: No products were found.

	<p>SARA 313 toxic chemicals notification and release reporting: No products were found.</p> <p>Clean Water Act (CWA) 307: No products were found. Clean Water Act (CWA) 311: No products were found. Clean Air Act (CAA) 112 accidental release prevention: No products were found. Clean Air Act (CAA) 112 regulated flammable substances: No products were found. Clean Air Act (CAA) 112 regulated toxic substances: No products were found. OSHA: No products were found.</p>
WHMIS (Canada):	N/A

SECTION 16: Other Information

LIABILITY STATEMENT: *The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. AG Scientific shall not be held liable for any damages resulting from handling or from contact with the above product. AG Scientific products are for research purposes only. Not for human use or consumption.*