

Safety Data Sheet

Section 1: Product & Company Identification

Product Name:	T4 DNA Ligase
Product #:	T-2839
Synonyms:	-
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 #	% Composition
T4 DNA Ligase	-		

Section 3: Hazards Identification

Symbols	N/A
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HMIS Rating

Health Hazard	Chronic Health Hazard	Flammability	Physical Hazard

NFPA Rating

Health Hazard	Fire Hazard	Reactivity Hazard

Section 4: First Aid Measures

General Overview:	May cause irritation to skin, eyes, and respiratory tract, may affect kidneys.
Inhalation:	Fresh air
Skin:	Immediately take off all contaminated clothing. Rinse skin with water/shower.
Eyes:	Rinse eyes with plenty of water. Immediately call an ophthalmologist. Remove contact lenses.
Ingestion:	Immediately make victim drink water (two glasses at most). Consult a physician.

See section 11 for more detailed information on health effects & symptoms.

SECTION 5: Fire Fighting Measures

Flammability of the product:	Combustible
Extinguishing Media:	Water, foam, carbon dioxide (CO ₂), dry powder
Hazardous thermal (de)composition products:	Carbon oxides. Fire may cause evolution of: Acrolein Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapors possible in the event of fire.
Special Fire Fighting Procedures:	Prevent fire extinguishing water from contaminating surface water or the ground water system.
Flash Point:	No data available





Section 6: Accidental Release Measures

Personal Precautions:	Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.
Environmental Precautions:	Do not let product enter drains.
Methods for Clean-up:	Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

SECTION 7: Handling & Storage

Storage:	Tightly closed. Keep away from heat and sources of ignition. Hygroscopic. Recommended storage temperature: -20°C
Handling:	Advice on safe handling: Work under hood. Do not inhale substance/mixture. Advice on protection against fire and explosion: Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge. Hygiene measures: Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

SECTION 8: Exposure controls / Personal Protection

Respiratory Protection:	 <p>If ventilation is insufficient, suitable respiratory protection should be worn.</p>
Skin and Body:	  <p>Wear rubber apron. Wear rubber footwear. It is recommended that gloves be made of the following materials: Nitrile rubber.</p>
Eyes:	 <p>The following protection should be worn: Chemical splash goggles.</p>
Ventilation/Engineering Measures:	Ensure adequate ventilation.
Hygiene:	Follow standard good industrial hygiene.
Other:	Contains no substances with occupational exposure limit values.

SECTION 9: Physical and Chemical Properties

Appearance & Odor:	Colorless, odorless liquid.
Formula	N/A
Molecular Wt.	N/A
Melting Pt.	No data available
Boiling Pt.	No data available
Density:	No data available

Vapor Pressure:	No data available
Evaporation Rate:	No data available
Vapor Density:	No data available
Solubility:	No data available
Flash Point:	No data available
Autoignition Temp:	No data available

SECTION 10: Stability and Reactivity

Stability:	The product is chemically stable under standard ambient conditions (room temperature).
Hazardous decomposition products:	Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical.
Materials to Avoid:	Violent reactions are possible with strong oxidizing agents.
Conditions to avoid:	Strong heating.

SECTION 11: Toxicological Information

RTECS#:	N/A
ACUTE Toxicity:	Flow-through test LC50 - Pimephales promelas (fathead minnow) - 54,000mg/l - 96 h May cause respiratory irritation by inhalation. Gastrointestinal symptoms, including stomach upset. Irritating to skin. Risk of irreversible effects on eyes.
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:	No data available
Mobility:	No data available
Persistence and degradability:	Aerobic - Exposure time 1 d.
Bioaccumulative potential:	Cyprinus carpio (Carp) - 72 h.
Other adverse effects:	No data available
Corrosivity Characteristic:	No data available
General Notes:	No data available

SECTION 13: Disposal Considerations

Residue Waste or Unused product:	Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste.
Contaminated Packaging:	Handle uncleaned containers like the product itself. See www.retrologistik.com for processes regarding the return of chemicals and containers or contact us there if you have further questions. Notice Directive on waste 2008/98/EC.

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:	H228: Flammable solid H302: Harmful if swallowed. H315: Causes skin irritation H318: Causes serious eye damage H335: May cause respiratory irritation H412: Harmful to aquatic life with long lasting effects.
Risk Phrases:	N/A
Safety Phrases:	N/A
EU Regulations:	N/A
US Regulations:	TSCA: Not listed California Proposition 65: No products were found
U.S. Federal Regulations:	SARA 302/304 emergency planning and notification: No products were found.

	<p>SARA 311/312 MSDS distribution-chemical inventory-hazard identification: No products were found.</p> <p>SARA 313 toxic chemicals notification and release reporting: No products were found.</p> <p>Clean Water Act (CWA) 307: No products were found.</p> <p>Clean Water Act (CWA) 311: No products were found.</p> <p>Clean Air Act (CAA) 112 accidental release prevention: No products were found.</p> <p>Clean Air Act (CAA) 112 regulated flammable substances: No products were found.</p> <p>Clean Air Act (CAA) 112 regulated toxic substances: No products were found.</p> <p>OSHA: N/A</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.*