

Section 1: Identification

1.1 Product Identifier:

Product/Material Name: TELL-Seq™ WGS Library Reagent Box 1, P/N 100001

1.2 Manufactured by:

Company: Universal Sequencing Technology

Address(es): (HQ) 780 Dedham St. Suite 800, Canton, MA 02021

(R&D) 2075 Corte Del Nogal Suite L&M, Carlsbad, CA 92011

Phone Number(s): +1 857-999-0988

Website: www.universalsequencing.com

1.3 Identified uses of the product, material or substance:

Recommended Use: This product is for research and development use only

Uses Advised Against: This product is NOT to be used in diagnostic procedures

Section 2: Hazard(s) Identification

2.1 Classification of Product/material

This product/material is considered not hazardous

2.2 Signal Words

None

2.3 Hazard Statement

There are no known hazards associated with this product/material

2.4 Hazard Symbols

None

2.5 Precautionary Statement(s)

None

2.6 Description of any Hazards not Otherwise Classified:

None

Section 3: Composition / Information of Ingredients

3.1 Substances:

General aqueous buffers, synthetic oligonucleotides, enzymes, Propylene Glycol, and Dimethyl Sulfoxide (DMSO). Only the DMSO carries any hazard warning in that its most significant occupational hazard is its ability to increase the absorption of other chemicals. With all the other products/materials in this kit being non-hazardous, this limits the risk.

3.2 Mixtures:

Salt Buffers, sugar solution, synthetic oligonucleotides in buffers, synthetic oligonucleotides attached to a substrate in buffer, and enzymes in buffers.

3.3 Chemicals with Trade Secret

No data available

Section 4: First Aid Measures

4.1 Description of First Aid Measures:

Eyes: in case of contact, immediately flush eyes with plenty of water. Get medical aid if irritation develops and persists.

Skin: in case of contact, flush skin with plenty of water. Get medical aid if irritation develops and persists.

Ingestion: if swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Rinse mouth with water.

Inhalation: if inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid

Notes to Physician: treat symptomatically and supportively

Section 5: Fire Fighting Measures

5.1 General Information:

As in any fire, wear a self-contained breathing apparatus in pressure demand, and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Combustible liquid and vapor. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas.

5.2 Extinguishing media:

Use water spray, dry chemical, carbon dioxide, or appropriate foam. Alcohol-resistant fire fighting foam is recommended for use on all water-soluble liquids or polar solvent-type liquids.

5.3 Special Hazards Arising from Substances or Mixtures:

Carbon oxides, oxides of sulfur, formaldehyde, dimethyl sulfide

5.4 Further Information: (related to DMSO)

NFPA Rating: (estimated) Health: 2; Flammability: 2; Instability: 0

Flash Point: 87.8 deg C (190.04 deg F)

Autoignition Temperature: 215 deg C (419.00 deg F)

Explosion Limit, Lower: 2.6 vol %

Explosion Limit, Upper: 42 vol %

Section 6: Accidental Release Measures

6.1 Personal Precautions, Protective Equipment and Emergency Procedures:

Use proper personal protective equipment as indicated in Section 8. Avoid dust formation, breathing vapors, mist or gas. Remove all ignition sources as added precaution.

6.2 Methods and Material used for Containment:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container away from any ignition source and provide ventilation.

Section 7: Handling and Storage

7.1 Precautions for Safe Handling

As a general precaution, always wear gloves when handling product/materials/chemicals in a laboratory/industrial setting. Handle in accordance with good industrial hygiene and safety practices. Follow Section 4's First Aid Measures if you come in contact with the product/material. Utilize standard good lab practices. Use in a well-ventilated area and wear standard PPE.

7.2 Conditions for Safe Storage:

Keep containers tightly closed and at the recommended storage temperatures.

Section 8: Exposure Controls / Personal Protection

8.1 Control Parameters:

Only the Propylene Glycol (CAS-No. 57-55-6) lists a control parameter, TWA of 10mg/m³

8.2 Engineering Controls:

Facilities storing or utilizing this product/material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

8.3 Personal Protective Equipment (PPE):

Eyes: wear eye protection, chemical splash goggles, safety glasses.

Skin: wear latex or nitrile gloves, lab coat, apron as necessary.

Inhalation: Respiratory protections not required.

Section 9: Physical and Chemical Properties

9.1 Information/Details on Basic Physical and Chemical Properties:

Physical State: All components within the kit are liquid at room temperature

Appearance: All components are clear, colorless liquids at room temperature.

Odor: one component, DMSO, has a very mild (practically odorless) odor

pH: where data is available, all materials are within pH of 7.0 – 8.5

Odor Threshold: No data available

Melting point/freezing point: -60°C (Propylene Glycol); 18.4°C (DMSO)

Initial boiling point and boiling range: 187°C (Propylene Glycol); 189°C (DMSO)

Flash Point: 103°C (Propylene Glycol); 87.8°C (DMSO)

Evaporation Rate: No data available

Flammability (solid, gas): No data available

Upper/lower flammability or explosive limit: U 12.5 %V, L 2.6%V (Propylene Glycol); U 42 %V, L 2.6%V (DMSO)

Vapor Pressure: 0.11 hPa at 20°C (Propylene Glycol); 0.46 mm HG at 20°C (DMSO)

Relative Density: 1.036 g/mL at 25°C (Propylene Glycol); 1.100g/mL (DMSO)

Solubility (ies): Soluble

Partition coefficient: n-octanol/water: log Pow: -0.8 at 25°C (Propylene Glycol)

Auto-ignition temperature: 215 deg C (DMSO)

Decomposition temperature: >189 deg C (DMSO)

Viscosity: No data available

Section 10: Stability and Reactivity

10.1 Reactivity:

This product is not reactive under normal storage and use conditions.

10.2 Chemical Stability:

Stable under recommended storage conditions. DMSO is hygroscopic: absorbs moisture or water from the air.

10.3 Possibility of Hazardous Reactions:

No data available

10.4 Conditions to Avoid:

Exposure to moisture, excessive heat and ignition sources

10.5 Incompatible Materials:

Strong acids, strong bases, oxidizing agents, acid chlorides, reducing agents, acid anhydrides, chloroformates

10.6 Hazardous Decomposition Products:

In the event of a fire see Section 5

Section 11: Toxicological Information

11.1 Likely Routes of Exposure:

The most likely routes of exposure are eye and skin contact. Exposures via inhalation or ingestion are less likely to occur.

11.2 Delayed and Immediate Effects or Chronic Effects from Short and Long-Term Exposure:

No data available

11.3 Numerical Measures of Toxicity:

No data available

11.4 Description of Symptoms:

Mild eye irritant, mild skin irritant

11.5 Carcinogenicity:

No material/component of this product is listed by IARC, OSHA, or NTP to be a potential carcinogen.