

**Material Safety Data Sheet**  
**Version No.: 2.0(29-04-2014)****T4 DNA Ligase****1. PRODUCT AND COMPANY INFORMATION****Product Name** : T4 DNA Ligase**Product Number** : E-3061**Product Use** : For research use only and are not intended for human or animal diagnostics,  
therapeutic , or other clinical uses, unless otherwise stated.**Company**

Bioneer corporation

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**2. HAZARDS IDENTIFICATION****GHS** – Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

Not a hazardous substance or mixture according to EC-directives 67/548/EEC or 1999/45/EC.

**Pictogram** : None**Signal Word** : None**Hazard statements:** None**Precautionary statements:** None**3. Composition/Information on Ingredient**

CAS No.	Component name	weight(%)
56-81-5	Glycerol	40~70

Note: The CAS number listed above is for Tris. HCl ( &lt; 1%) was added to the Tris to alter the pH level.

The ingredients listed in this section include only those items that have more than 1% of a component classified as hazardous and 0.1% of a component classified as carcinogenic.

**4. FIRST AID MEASURES**

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**Eye contact**

- Flush eyes with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating eyelids.

**Skin contact**

- Wash off immediately with plenty of water.

**Inhaled**

- Move to fresh air

**Swallowed**

- If the person is conscious, wash out mouth with water. Call a physician.
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**5. Firefighting measures**

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**Suitable extinguishing media**

- Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

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

- Carbon oxides, nitrogen oxides (NO<sub>x</sub>), Sulphur oxides

**Advice for firefighters**

- Wear self contained breathing apparatus for fire fighting if necessary.
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**6. Accidental release measures**

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

- Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

**Environmental precautions**

- Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

**Methods and materials for containment and cleaning up**

- Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.
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**7. Handling and storage**

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**Precautions for safe handling**

- No special measures required.
  - Provide appropriate exhaust ventilation at places where dust is formed.
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- Normal measures for preventive fire protection.

**Conditions for safe storage, including any incompatibilities**

- Store in cool place. Keep container tightly closed in a dry and well-ventilated place.
  - Recommended storage temperature: -20 °C
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**8. Exposure controls/personal protection**

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**Appropriate engineering controls**

- Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Personal protective equipment****Respiratory protection**

- Respiratory protection not required.

**Eye/face protection**

- Goggles recommended during refilling.

**Skin protection**

- Handle with gloves.

**Body Protection**

- impervious clothing
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**9. Physical and chemical properties**

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**Appearance** : form – liquid

colour – colorless

**Odour** : odourless

**Odour Threshold** : no data available

**pH** : 7.5

**Melting point/freezing point** : no data available

**Initial boiling point and boiling range** : no data available

**Flash point** : no data available

**Evaporation rate** : no data available

**Flammability (solid, gas)** : no data available

**Upper/lower flammability or explosive limits** : no data available

**Vapour pressure** : no data available

**Vapour density** : no data available

**Relative density** : no data available

**Partition coefficient**: noctanol/water : no data available

**Auto-ignition temperature** : no data available

**Decomposition temperature** : no data available

**Viscosity** : no data available

**Explosive properties** : no data available

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## 10. Stability and reactivity

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**Chemical stability** : Stable under recommended storage conditions.

**Possibility of hazardous reactions** : no data available

**Conditions to avoid** : no data available

**Incompatible materials** : no data available

**Hazardous decomposition products** : no data available

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## 11. Toxicological information

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**Acute toxicity** : no data available

**Skin corrosion/irritation** : no data available

**Serious eye damage/eye irritation** : no data available

**Respiratory sensitisation** : no data available

**skin sensitisation** : no data available

**Carcinogenicity** : 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

**Germ cell mutagenicity** : no data available

**Specific target organ toxicity – single exposure** : no data available

**Specific target organ toxicity – repeated exposure** : no data available

**Aspiration hazard** : no data available

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## 12. Ecological information

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**Toxicity** : no data available

**Persistence and degradability** : no data available

**Bioaccumulative potential** : no data available

**Mobility in soil** : no data available

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## 13. Disposal considerations

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**Waste treatment methods** : Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging** : Dispose of as unused product.

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## 14. Transport information

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**UN number** : no data available

**UN proper shipping name**

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

**Transport hazard class** : no data available

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**Packaging group** : no data available

**Environmental hazards** : no data available

**Special precautions for user** : no data available

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## 15. Regulatory information

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**Safety, health and environmental regulations/legislation specific for the substance or mixture**

no data available

### **Chemical Safety Assessment**

For this product a chemical safety assessment was not carried out

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## 16. Other information

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### **Material source**

Korea Occupational Safety and Health Agency, National Chemicals Information System

**Version No.:** 2.0(29-04-2014)

### **Further information**

This information is based on our present knowledge and shall be used only as a guide. However, this shall not constitute a guarantee for any specific product features. BIONEER is not held liable for any damage resulting from handling or from contact with the above products.

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