

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## T4 DNA Ligase

*E. coli* lambda lysogen NM 989

### 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Name: T4 DNA Ligase  
Catalog Number: EN-149S;EN-149L  
Supplier: Jena Bioscience GmbH  
Loebstedter Strasse 71  
07749 Jena, Germany  
Telephone: +49 - 3641 - 62 85 000  
Fax: +49 - 3641 - 62 85 100  
e-Mail: [info@jenabioscience.com](mailto:info@jenabioscience.com)  
WWW: <http://www.jenabioscience.com>

### 2. HAZARDS IDENTIFICATION

This substance is not classified as dangerous according to Regulation (EC) No. 1272/2008 (EU-GHS/CLP).

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms:  
Formula:  
Molecular Weight:  
CAS-No.:  
EC number:  
Classification: -  
Concentration: 2.5 Weiss units/ $\mu$ l (500 CE units/ $\mu$ l)

### 4. FIRST AID MEASURES

#### If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration.

#### In case of skin contact

Wash off with soap and plenty of water.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water.

### 5. FIRE-FIGHTING MEASURES

#### Suitable extinguishing media

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

#### Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## T4 DNA Ligase

*E. coli* lambda lysogen NM 989

### 6. ACCIDENTAL RELEASE MEASURES

#### Personal precautions

Avoid dust formation.

#### Environmental precautions

Do not let product enter drains.

#### Methods and materials for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

### 7. HANDLING AND STORAGE

#### Handling

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

#### Storage

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature: store at -20 °C

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Personal protective equipment

##### Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

##### Hand protection

For prolonged or repeated contact use protective gloves.

##### Eye protection

Safety glasses

##### Hygiene measures

General industrial hygiene practice.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Appearance

Form: liquid (Supplied in 10 mM Tris-HCl pH 7.4, 50 mM KCl, 0.1 mM EDTA, 1 mM DTT, 200 µg/ml BSA and 50 % [v/v] glycerol)

#### Safety data

pH:

Melting point: no data available

Boiling point: no data available



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## T4 DNA Ligase

*E. coli* lambda lysogen NM 989

Flash point:	no data available
Ignition temperature:	no data available
Lower explosion limit:	no data available
Upper explosion limit:	no data available
Water solubility:	no data available

## 10. STABILITY AND REACTIVITY

### Storage stability

Stable under recommended storage conditions.

### Materials to avoid

Strong oxidizing agents.

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), Oxides of phosphorus, Lithium oxides.

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

no data available

### Irritation and corrosion

no data available

### Sensitisation

no data available

### Chronic exposure

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.

### Signs and Symptoms of Exposure

Dermatitis

### Potential Health Effects

Inhalation:	May be harmful if inhaled. May cause respiratory tract irritation.
Skin:	May be harmful if absorbed through skin. May cause skin irritation.
Eyes:	May cause eye irritation.
Ingestion:	May be harmful if swallowed.
Target Organs:	Liver, Kidney

## 12. ECOLOGICAL INFORMATION

### Elimination information (persistence and degradability)



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## T4 DNA Ligase

*E. coli* lambda lysogen NM 989

no data available

### Ecotoxicity effects

no data available

### Further information on ecology

no data available

## 13. DISPOSAL CONSIDERATIONS

### Product

Observe all federal, state, and local environmental regulations.

### Contaminated packaging

Dispose of as unused product.

## 14. TRANSPORT INFORMATION

### ADR/RID

Not dangerous goods

### IMDG

Not dangerous goods

### IATA

Not dangerous goods

## 15. REGULATORY INFORMATION

### Labelling according to EC Directives

The product does not need to be labelled in accordance with EC directives or respective national laws.

## 16. OTHER INFORMATION

### Further information

© 2017 Jena Bioscience GmbH

This material is sold for research purposes only and is not required to appear on the TSCA inventory. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals. Users should make independent decisions regarding completeness of the information based on all sources available.

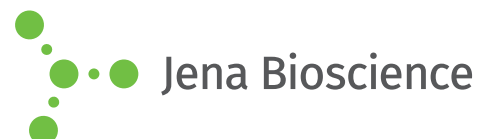
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

Jena Bioscience GmbH shall not be held liable for any damage resulting from handling or from contact with the above product. See our website for our terms and conditions of sales.



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## T4 DNA Ligase

*E. coli* lambda lysogen NM 989

### 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Name: T4 DNA Ligase 10x Reaction Buffer and 2x Fast Ligation Buffer  
Catalog Number: EN-149S;EN-149L  
Supplier: Jena Bioscience GmbH  
Loebstedter Strasse 71  
07749 Jena, Germany  
Telephone: +49 - 3641 - 62 85 000  
Fax: +49 - 3641 - 62 85 100  
e-Mail: [info@jenabioscience.com](mailto:info@jenabioscience.com)  
WWW: <http://www.jenabioscience.com>

### 2. HAZARDS IDENTIFICATION

This substance is not classified as dangerous according to Regulation (EC) No. 1272/2008 (EU-GHS/CLP).

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.2 Mixtures

The product is a mixture of the hazardous substances listed below along with unlisted nonhazardous substances.

#### DTT

Synonyms: DL-Dithiothreitol  
Formula:  $C_4H_{10}O_2S_2$   
Molecular Weight: 154,25 g/mol  
CAS-No.: 3483-12-3  
EC number: 222-468-7  
Classification: H302: Acute Tox.4; H315: Skin Irrit.2; H319: Eye Irrit.2; H335: STOT SE3  
Concentration: < 2.00%

### 4. FIRST AID MEASURES

#### If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration.

#### In case of skin contact

Wash off with soap and plenty of water.

#### In case of eye contact

Flush eyes with water as a precaution.

#### If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water.

### 5. FIRE-FIGHTING MEASURES

#### Suitable extinguishing media



IFTA AG  
Certified QMS and EMS according to  
DIN EN ISO 9001 and DIN EN ISO 14001  
Reg.-No.: ICV03597 034 and ICV03597 534

Jena Bioscience GmbH  
Löbstedter Str. 71 | 07749 Jena, Germany | Tel.: +49-3641-6285 000 | Fax: +49-3641-6285 100  
<http://www.jenabioscience.com>

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## T4 DNA Ligase

*E. coli* lambda lysogen NM 989

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

### Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions

Avoid dust formation.

### Environmental precautions

Do not let product enter drains.

### Methods and materials for containment and cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

## 7. HANDLING AND STORAGE

### Handling

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

### Storage

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature: store at -20 °C

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Personal protective equipment

#### Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Hand protection

For prolonged or repeated contact use protective gloves.

#### Eye protection

Safety glasses

#### Hygiene measures

General industrial hygiene practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

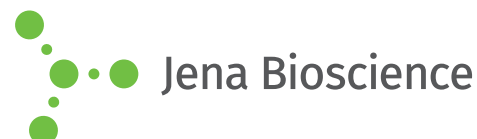
### Appearance

Form: liquid (Supplied in 10 mM Tris-HCl pH 7.4, 50 mM KCl, 0.1 mM EDTA, 1 mM DTT, 200 µg/ml BSA and 50 % [v/v] glycerol)



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## T4 DNA Ligase

*E. coli* lambda lysogen NM 989

### Safety data

pH:	
Melting point:	no data available
Boiling point:	no data available
Flash point:	no data available
Ignition temperature:	no data available
Lower explosion limit:	no data available
Upper explosion limit:	no data available
Water solubility:	no data available

## 10. STABILITY AND REACTIVITY

### Storage stability

Stable under recommended storage conditions.

### Materials to avoid

Strong oxidizing agents.

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NO<sub>x</sub>), Oxides of phosphorus, Lithium oxides.

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

no data available

### Irritation and corrosion

no data available

### Sensitisation

no data available

### Chronic exposure

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.

### Signs and Symptoms of Exposure

Dermatitis

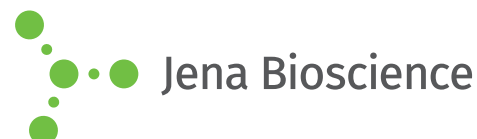
### Potential Health Effects

Inhalation:	May be harmful if inhaled. May cause respiratory tract irritation.
Skin:	May be harmful if absorbed through skin. May cause skin irritation.
Eyes:	May cause eye irritation.



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## T4 DNA Ligase

*E. coli* lambda lysogen NM 989

Ingestion: May be harmful if swallowed.  
Target Organs: Liver, Kidney

### 12. ECOLOGICAL INFORMATION

#### Elimination information (persistence and degradability)

no data available

#### Ecotoxicity effects

no data available

#### Further information on ecology

no data available

### 13. DISPOSAL CONSIDERATIONS

#### Product

Observe all federal, state, and local environmental regulations.

#### Contaminated packaging

Dispose of as unused product.

### 14. TRANSPORT INFORMATION

#### ADR/RID

Not dangerous goods

#### IMDG

Not dangerous goods

#### IATA

Not dangerous goods

### 15. REGULATORY INFORMATION

#### Labelling according to EC Directives

The product does not need to be labelled in accordance with EC directives or respective national laws.

### 16. OTHER INFORMATION

#### Further information

© 2017 Jena Bioscience GmbH

This material is sold for research purposes only and is not required to appear on the TSCA inventory. It is not intended for food, drug, household, agricultural or cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals. Users should make independent decisions regarding completeness of the information based on all sources available.

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.



IFTA AG  
Certified QMS and EMS according to  
DIN EN ISO 9001 and DIN EN ISO 14001  
Reg.-No.: ICV03597 034 and ICV03597 534

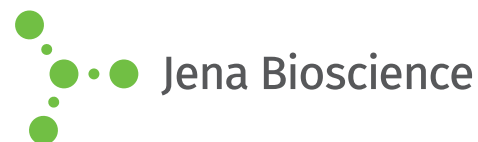
Jena Bioscience GmbH  
Löbstedter Str. 71 | 07749 Jena, Germany | Tel.: +49-3641-6285 000 | Fax: +49-3641-6285 100  
<http://www.jenabioscience.com>

Page 8  
Version: 0002, Last update: Sep 21, 2018



# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



## T4 DNA Ligase

*E. coli* lambda lysogen NM 989

Jena Bioscience GmbH shall not be held liable for any damage resulting from handling or from contact with the above product. See our website for our terms and conditions of sales.



IFTA AG  
Certified QMS and EMS according to  
DIN EN ISO 9001 and DIN EN ISO 14001  
Reg.-No.: ICV03597 034 and ICV03597 534

Jena Bioscience GmbH  
Löbstedter Str. 71 | 07749 Jena, Germany | Tel.: +49-3641-6285 000 | Fax: +49-3641-6285 100  
<http://www.jenabioscience.com>

Page 9  
Version: 0002, Last update: Sep 21, 2018