

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

ProductName : Polynucleotide Kinase, from T4-infected *Escherichia coli*

2. HAZARDS IDENTIFICATION

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

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS-No.	EC-No.		Classification	Concentration
<b>Glycerol</b> 56-81-5	200-289-5	-	-	>= 45 - < 60 %
<b>Water</b> 7732-18-5	231-791-2	-	-	>= 45 - <= 60 %
<b>Kinase (phosphorylating), polynucleotide 5'-hydroxyl</b> 37211-65-7	253-400-4	-	-	<= 5 %
<b>2-Amino-2-(hydroxymethyl)propane-1,3-diol hydrochloride</b> 1185-53-1	214-684-5	-	Xi, R36/37/38	0,31 %
<b>Potassium chloride</b> 7447-40-7	231-211-8	-	-	0,19 %
<b>(R*,R*)-1,4-Dimercaptobutane-2,3-diol</b> 3483-12-3	222-468-7	-	Xn, R22 - R36/37/38	<= 0,05 %
<b>Ethylenediaminetetraacetic acid disodium dihydrate</b> 6381-92-6	205-358-3	-	-	< 0,005 %
<b>Adenosine 5'-(tetrahydrogen triphosphate), disodium salt, trihydrate</b> 51963-61-2	213-579-1	-	-	< 0,001 %

For the full text of the R-phrases mentioned in this Section, see Section 16.

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.

6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**  
Avoid breathing vapors, mist or gas.

**Environmental precautions**  
Do not let product enter drains.

**Methods for cleaning up**  
Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

**Handling**  
Normal measures for preventive fire protection.

**Storage**  
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage temperature: -20 °C

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Personal protective equipment**

**Respiratory protection**  
Respiratory protection is not required. Where protection is desired, use multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges. 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

<b>Appearance</b>	
Form	clear, liquid
<b>Safety data</b>	
pH	7,5
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 bases, Bases, Oxidizing agents, Strong oxidizing agents, Strong acids

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**  
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Potential Health Effects**

<b>Inhalation</b>	May be harmful if inhaled. May cause respiratory tract irritation.
<b>Skin</b>	May be harmful if absorbed through skin. May cause skin irritation.
<b>Eyes</b>	May cause eye irritation.
<b>Ingestion</b>	May be harmful if swallowed.
<b>Target Organs</b>	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**

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

16. OTHER INFORMATION

**Text of R-phrases mentioned in Section 3**

R22	Harmful if swallowed.
R36/37/38	Irritating to eyes, respiratory system and skin.

**Further information**



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WARRANTY:  
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