

Reviewed on 2008/09/29

**1. Product and Company Information**Product Name : 10X reaction Buffer containing MgCl<sub>2</sub> for T4 DNA Ligase

Product Number : N/A(Buffer)

Company : Bioneer

Address : BIONEER CORPORATION

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**2. Composition/Information on Ingredient****Hazardous/Non-hazardous Components**

Chemical Name	CAS No.	EINECS No.	Weight %
Tris HCl	1185-53-1		≥ 1
Water, Distilled	7732-18-5	231-791-2	60-100
Magnesium Chloride	7791-18-6	232-094-6	≥ 1

**3. Hazards Identification.**

The product is classified and labelled in accordance with Directive 1999/45/EC.

Classification

Indication of danger

Xi - Irritant



R36/38 - Irritating to eyes and skin

**4. First Aid Measures.****Skin contact** : Wash off immediately with plenty of water**Eye contact** : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes**Ingestion** : Never give anything by mouth to an unconscious person**Inhalation** : Move to fresh air**Notes to physician** : Treat symptomatically**5. Fire Fighting Measures.****Suitable extinguishing media** : Dry chemical**Special protective equipment for firefighters** : Wear self-contained breathing apparatus and protective

suit

**6. Accidental Release Measures**

**Personal precautions :** Use personal protective equipment

**Methods for cleaning up :** Soak up with inert absorbent material

**7. Handling / Storage**

**Handling :** No special handling advice required

**Storage :** Keep in properly labelled containers

**8. Exposure Controls / Personal Protection**

Chemical Name	EU OEL(TWA)	EU OEL(STEL)	EU Skin Notation	Austria OEL(MAK)
Tris HCl	-	-	-	-
Water, Distilled	-	-	-	-
Magnesium Chloride	No data available	No data available	-	-

Chemical Name	Belgium(TWA)	Denmark(TWA)	Finland OEL(TWA)	France OEL(VME)
Tris HCl	-	-	-	-
Water, Distilled	-	-	-	-
Magnesium Chloride	-	-	-	-

Chemical Name	Germany OEL(TWA)	Ireland(TWA)	Italy OEL(TWA)
Tris HCl	-	-	-
Water, Distilled	-	-	-
Magnesium Chloride	-	-	-

Chemical Name	Netherlands OEL(MAC)	Spain OEL(TWA)	United Kingdom
Tris HCl	-	-	-
Water, Distilled	-	-	-
Magnesium Chloride	-	-	-

**Engineering measures :** Ensure adequate ventilation, especially in confined areas

**Personal protective equipment**

**Respiratory protection :** In case of insufficient ventilation wear suitable respiratory equipment

**Hand protection :** Impervious gloves.

**Eye protection :** Safety glasses with side-shields

**Skin and body protection :** Lightweight protective clothing.

**Hygiene measures :** Handle in accordance with good industrial hygiene and safety practice

**Environmental exposure controls :** Prevent product from entering drains..

**9. Physical / Chemical Properties**

**General Information**

**Form :** Liquid

**Important Health Safety and Environmental Information**

**Boiling point/range** °C No data available °F No data available

**Melting point/range** °C No data available °F No data available

**Flash point** °C No data available °F No data available

**Autoignition temperature** °C No data available °F No data available

**Oxidizing properties :** No information available

**Water solubility :** No data available

**10. Stability / Reactivity**

**Stability :** Stable under normal conditions.

**Materials to avoid :** No information available

**Hazardous decomposition products :** No information available

**Polymerization :** Hazardous polymerisation does not occur

**11. Toxicological Information**

**Acute toxicity**

Chemical Name	LD50(oral, rat/mouse)	LD50(dermal, rat/rabbit)	LC50(inhalation, rat/mouse)
Tris HCl	No data available	No data available	No data available
Water, Distilled	No data available	No data available	No data available
Magnesium Chloride	8.1mg/kg	No data available	No data available

**Principle Routes of Exposure/**

**Potential Health effects**

**Eyes :** May cause eye irritation with susceptible persons.

**Skin :** May cause skin irritation in susceptible persons.

**Inhalation :** No information available

**Ingestion** : No information available

**Specific effects**

**Carcinogenic effects** : No information available

**Mutagenic effects** : No information available

**Reproductive toxicity** : No information available

**Sensitization** : No information available

**Target Organ Effects** : Eyes. Skin.

**12. Ecological Information**

**Ecotoxicity effects** : No information available.

**Mobility** : No information available.

**Biodegradation** : No information available.

**Bioaccumulation** : No information available.

**13. Disposal Considerations**

Dispose of in accordance with local regulations.

**14. Transport Information**

**IATA**

**Proper shipping name** : Not classified as dangerous in the meaning of transport regulations

**Hazard Class** : No information available

**Subsidiary Class** : No information available

**Packing group** : No information available

**UN-No** : No information available

**15. Regulatory Information**

**Korea regulatory information**

None of the ingredients listed.

**In accordance with local and national regulations, The product is classified and labelled in accordance with Directive 1999/45/EC.**

**Indication of danger**

Xi - Irritant



**R -phrase(s)**

No information available

R36/38 - Irritating to eyes and skin

**S -phrase(s)**

S24/25 - Avoid contact with skin and eyes

**International Inventories**

Chemical Name	EINECS	ELINCS	PICCS	ENCS
Tris HCl	Listed		Listed	
Water, Distilled	Listed		Listed	
Magnesium Chloride	Listed		Listed	Listed

Chemical Name	TSCA	CHINA	AICS	KECL
Tris HCl	Listed	Listed	Listed	Listed
Water, Distilled	Listed	Listed	Listed	Listed
Magnesium Chloride	Listed	Listed	Listed	Listed

**16. Other 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.