

Reviewed on 2008/09/29

1. Product and Company Information

Product Name : 5X reaction Buffer containing MgCl₂ for MMLV Rtase
 Product Number : N/A(Buffer)
 Company : Bioneer
 Address : BIONEER CORPORATION
 49-3, Munpyeong-dong, Daedeok-gu, Daejeon 306-220, Korea
 Technical Phone: +82-042-930-8523

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
Potassium Chloride	7447-40-7		≥ 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	-	-	-	-
Potassium Chloride	-	-	-	-

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

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

Chemical Name	Netherlands OEL(MAC)	Spain OEL(TWA)	United Kingdom
Tris HCl	-	-	-
Water, Distilled	-	-	-
Potassium 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
Potassium Chloride	2600mg/kg(rat)	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	
Potassium Chloride	Listed		Listed	Listed

Chemical Name	TSCA	CHINA	AICS	KECL
Tris HCl	Listed	Listed	Listed	Listed
Water, Distilled	Listed	Listed	Listed	Listed
Potassium 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.