



Manufacturers of Instruments for  
pH, Redox, Specific Ions,  
Conductivity, Salinity,  
Dissolved Oxygen,  
Humidity, Temperature,  
for Research and Industry



**Manufacturer** : Australian Chemical Reagents  
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## MATERIAL SAFETY DATA SHEET

Not Classified as Hazardous According to Criteria of Worksafe Australia

### IDENTIFICATION

**Product Name** : GFR2  
**TPS Part No** : 121812  
**Description** : Reference Filling Gel 2 (2M NH<sub>4</sub>(SO<sub>4</sub>)), 10 mL

**UN Number** : None Allocated  
**Other Names** : Nil  
**Manufacturers Code** : GCREF2

**Dangerous Goods Class** : None Allocated  
**Subsidiary Risk** : None Allocated  
**Hazchem Code** : None Allocated  
**Poisons Schedule** : Not Scheduled

**Uses** : Analytical Reagent

#### Physical Description / Properties :

**Appearance** : Clear gel  
**Boiling Point (°C)** : 100 (approx)  
**Vapour Pressure (mm of Hg @ 25°C)** : 25 (approx)  
**Specific Gravity** : 1  
**Flash Point (°C)** : Not flammable  
**Flammability Limits (%)** : Not flammable  
**Solubility in Water (g/L)** : Completely miscible

#### Other Properties :

#### Ingredients :

Chemical Entity	CAS No	Proportion
Ammonium sulphate	[7783-20-2]	13.2%
Hydroxyethyl cellulose	[9004-62-0]	2%
Ethylene glycol	[107-21-1]	10%
Water	[7732-18-5]	to 100%

NH<sub>4</sub>(SO<sub>4</sub>) Gel

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## HEALTH HAZARD INFORMATION

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### Health Effects :

- Swallowed** : May be harmful if swallowed. May cause irritation of the gastric system. For ethylene glycol LDLo human estimated as 1.6g/kg. Oral-rat LD50 6140 - 8540mg/kg.
- Eye** : May be irritating to eye tissue.
- Skin** : May irritate skin tissue with prolonged contact.
- Inhaled** : Not considered a hazard with normal laboratory use.
- Chronic Effects** : No data available.

### First Aid :

- Swallowed** : If conscious wash out mouth with water. Seek medical advice. Show this MSDS to medical practitioner.
- Eye** : Immediately hold eyelids open and flood with water for at least 15 minutes. Obtain medical aid. Show this MSDS to medical practitioner.
- Skin** : Remove contaminated clothing. Immediately wash skin thoroughly with water and mild soap. Seek medical advice if irritation persists. Show this MSDS to medical practitioner.
- Launder clothing before reuse.
- Inhaled** : Remove from contaminated air. Maintain breathing with artificial respiration if necessary. Seek medical assistance. Show this MSDS to a doctor.

### Advice to Doctor :

Treat symptomatically

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## PRECAUTIONS FOR USE

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- Exposure Limits** : Worksafe : Ethylene glycol (vapour) 60mg/m<sup>3</sup> (TWA) 120mg/m<sup>3</sup> (STEL)
- Engineering Controls** : Not usually required with normal use.
- Personal Protection** : Not required with normal use.
- Flammability** : Not flammable.



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## SAFE HANDLING INFORMATION

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**Storage & Transport** : Store sealed in original container in a cool well ventilated situation away from foods and other chemicals. Observe good hygiene and housekeeping practices.

No special transport requirements apply.

**Spills & Disposal** : Mop up spills and flush to waste if local regulations permit.

**Fire/Explosion Hazard** : Fire fighters should wear self contained breathing apparatus and impervious clothing if exposure to fumes is likely. Use water spray, foam or dry chemical to control fire situation if compatible with other chemical products in the vicinity. Decomposition products include ammonia.

**Other :**

References :

Lenga, R.E. (Ed.) *Safety The Sigma Aldrich Library of Chemical Safety Data* Sigma Aldrich Corporation 1985

National Institute for Occupational Safety & Health *NIOSH Pocket Guide to Chemical Hazards* 1990.

Merck & Co Inc. *The Merck Index 11th Ed.* Merck & Co 1989.

International Labour Office *Encyclopaedia of Occupational Health & Safety* Vol 1 & 2 International Labour Office 1983

National Occupational Health & Safety Commission *Exposure Standards for Atmospheric Contaminants in the Occupational Environment* AGPS 1995

National Occupational Health & Safety Commission *List of Designated Hazardous Substances* [ NOHSC:10005(1994)] AGPS 1994

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