

# Material Safety Data Sheet

## Calcium (CPC) Reagent

### 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product Name:** Calcium (CPC) Reagent

**Catalog Number:** TR29321

**Use:** This reagent is intended for in vitro quantitative determination of calcium in human serum or plasma.

THERMO ELECTRON  
189 - 199 Browns Rd  
NOBLE PARK VIC 3174  
AUSTRALIA  
Tel: +61 3 9790 4100  
Fax: +61 3 9790 4155  
E-mail: [info.clinicalchemistry@thermo.com](mailto:info.clinicalchemistry@thermo.com)

THERMO ELECTRON  
331 South 104<sup>th</sup> Street  
LOUISVILLE, CO 80027  
U.S.A  
Tel: (303) 581 6428  
Fax: (303) 581 6429  
E-mail: [info.clinicalchemistry@thermo.com](mailto:info.clinicalchemistry@thermo.com)

#### Contact Point

##### Australia

Quality Assurance Manager:

Tel: +61 3 9790 4100

Mon – Fri 9:00am to 5:00pm

##### U.S.A

Chemtel

24 Hour Emergency Assistance

1-800-255-3924

### 2. HAZARDS IDENTIFICATION

Classified as hazardous according to the EU criteria

#### Reagent A

**Hazard Category:** Irritant (Xi)

**Hazard Classification:** HAZARDOUS SUBSTANCE, NON-DANGEROUS GOODS.

#### RISK PHRASES

R38 Irritating to skin.

R41 Risk of serious damage to eyes.

#### SAFETY PHRASES

S24/25 Avoid contact with skin and eyes.

S26 In case of contact with eyes, rinse immediately with plenty of water and contact a medical advice.

**Poison Schedule:** None allocated.

#### Warning Statement:

Eye contact will lead to injury, prolonged exposure to skin may cause severe irritation.

#### Reagent B

**Hazard Classification:** HAZARDOUS SUBSTANCE, NON-DANGEROUS GOODS.

**Hazard Category:** Irritant (Xi)

#### RISK PHRASES

R36/38 Irritating to eyes and skin.

#### SAFETY PHRASES

S24/25 Avoid contact with skin and eyes.

S23 Do not breathe vapour

#### Poison Schedule: S5

This material is a Scheduled S5 Poison and must be stored, handled and used according to SUSDP (Australia only) .

#### Warning Statement:

High alkalinity of product will cause irritation to eyes and skin. Avoid breathing vapours.

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### 3. COMPOSITION / INFORMATION ON INGREDIENTS

#### Reagent A

SUBSTANCE NAME	Proportion	CAS Number
HYDROCHLORIC ACID	1 - 2 %	7647-01-0
WATER AND OTHER NON HAZARDOUS INGREDIENTS	Balance	Mixture

All other ingredients determined not to be hazardous according to the EU criteria.

#### Reagent B

SUBSTANCE NAME	Proportion	CAS Number
2-AMINO-2-METHYL-1-PROPANOL	1 - 10 %	124-68-5
WATER AND OTHER NON HAZARDOUS INGREDIENTS	Balance	Mixture

All other ingredients determined not to be hazardous according to the EU criteria.

### 4. FIRST AID MEASURES

#### Swallowed:

If swallowed, **DO NOT** induce vomiting. If conscious, give 1 to 2 glasses of water to drink. Seek immediate medical assistance.

#### Eye:

If material is splashed into eyes, immediately, flush with plenty of water for 15 minutes, ensuring eye lids are held open. If irritation persists transport to hospital or doctor.

#### Skin:

If material is splashed onto the skin, remove any contaminated clothing and wash skin thoroughly with soap and water. If irritation persists transport to hospital or doctor.

#### Inhaled:

Move victim to fresh air. Apply resuscitation if victim is not breathing.

#### First Aid Facilities:

Eye wash fountain, safety shower and normal wash room facilities.

#### Advice to Doctor:

Treat symptomatically.

In case of poisoning, contact Poisons Information Centre

**In Australia call Tel: 131126**

**In New Zealand Tel: 034747000**

### 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media:** Use water fog, foam or dry chemical powder.

**Hazards From Combustion Products:** Primary decomposition products include noxious smoke.

**Precautions for Fire Fighters and Special Protective Equipment:** If safe to do so, move undamaged containers from fire area. Fire fighters to wear Self-contained breathing apparatus (SCBA) in confined spaces, in oxygen deficient atmospheres or if exposed to products of decomposition.

**HAZCHEM CODE:** None allocated

#### Reagent A

##### Flammability

Heat or damage to containers may release corrosive fumes of hydrogen chloride and oxides of nitrogen.

#### Reagent B

##### Flammability

This material is not a combustible or flammable liquid.

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### 6. ACCIDENTAL RELEASE MEASURES

**Emergency Procedures:**

Keep unnecessary people away; Isolate hazard area and deny entry. **Caution!** Material may be slippery when spilt. Walk cautiously. Wear protective equipment to prevent skin and eye contact, as outlined under personal protection in this MSDS.

**Methods and Materials for Containment and Clean Up Procedures:**

Bund area using diatomaceous earth or other inert absorbent material - to prevent run off into drains and waterways. Throw further diatomaceous earth or other inert material onto spill and then shovel up and seal in properly labelled containers for disposal. Add dilute solution of soda ash onto remainder of spill contaminate to allow neutralization efflorescence (carbon dioxide) will be seen, when completed flush to drain with large quantities of water.

### 7. HANDLING AND STORAGE

**Precautions for Safe Handling:**

Prevent eye and skin contact. Provide adequate ventilation. Avoid generating vapour.

**Conditions for Safe Storage:**

Keep containers tightly closed in a cool place and out of direct sunlight. Store away from strong acids and oxidizers. Store at 2-8°C and the reagent will be stable until the expiry date stated on the bottle and kit box labels. Store in original packages as approved by manufacturer.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Reagent A****Exposure Standards**

No exposure standards are available for this product, however, the following exposure standards have been assigned by the National Occupational Health & Safety Commission (NOHSC) to the following component of the product:

**HYDROCHLORIC ACID**

(Worksafe Australia)

[TWA]5 ppm 7.5 mg/m<sup>3</sup>

[STEL]Peak limitation

**Peak Limitation:** For some rapidly acting substances and irritants, the averaging of the airborne concentration over an eight hour period is inappropriate. These substances may induce acute effects after relatively brief exposure to high concentrations and so the exposure standard for these substances represents a maximum or "peak concentration" to which workers may be exposed.

**Notices:** H

**Reagent B****Exposure Standards**

No exposure standards are available for this product.

**Engineering Controls**

Maintain adequate ventilation at all times. No other measures are required for this product.

**Engineering Controls**

Maintain adequate ventilation at all times. In most circumstances natural ventilation systems are adequate .

**Personal Protection Equipment**

**GLOVES:** The use of nitrile or neoprene gloves is recommended.

**EYES:** Chemical goggles or glasses to protect eyes.

**RESPIRATORY PROTECTION:** Avoid breathing of mists. The use of a respirator is not normally required, however, if entering spaces where the airborne concentration of a contaminant is unknown then the use of a Self-contained breathing apparatus (SCBA) with positive pressure air supply complying with AS/NZS 1715 / 1716, or any other acceptable International Standard is recommended. Select and use respirators in accordance with AS/NZS 1715/1716.

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### 9. PHYSICAL AND CHEMICAL PROPERTIES

	<b>Reagent A</b>	<b>Reagent B</b>
<b>Appearance:</b>	Clear yellow liquid with faint odour.	Clear liquid with no odour.
<b>Boiling Point:</b>	Not available.	Not available.
<b>Freezing Point:</b>	Not available.	Not available.
<b>Vapour Pressure:</b>	Not available.	Not available.
<b>Specific Gravity:</b>	Not available.	Not available.
<b>Flash Point:</b>	Not applicable.	Not applicable.
<b>Flammability Limits:</b>	Not applicable.	Not applicable.
<b>Solubility in Water:</b>	Completely miscible.	Completely miscible.
<b>Other Properties</b>		
<b>pH:</b>	1.06 @ 20°C	12.07 @ 20°C

### 10. STABILITY AND REACTIVITY

#### CHEMICAL STABILITY:

Stable under normal conditions of use.

#### CONDITIONS TO AVOID:

##### Reagent A

Eye and prolonged skin contact. Incompatibles, especially reaction with zinc, aluminium or magnesium, which may release flammable hydrogen gas which could be ignited by heat, flames, ignition sources and led to an explosion.

##### Reagent B

Generation of mists.

#### INCOMPATIBLE MATERIALS:

Strong mineral acids and oxidizers.

#### HAZARDOUS DECOMPOSITION PRODUCTS:

##### Reagent A

Emits corrosive fumes of hydrogen chloride and oxides of nitrogen when heated to decomposition.

##### Reagent B

Primary decomposition products are, oxides of nitrogen and carbon.

#### HAZARDOUS REACTIONS:

Will not occur.

### 11. TOXICOLOGICAL INFORMATION

#### Reagent A

There is no toxicological information available for this product, however, for the ingredient:

#### Hydrochloric acid:

According to OECD Guideline for the Testing of Chemicals (OECD 405) for eye corrosion and OECD Guideline for the Testing of Chemicals (OECD 404) for skin corrosion, both test procedures have been utilized to determine that hydrochloric acid is a confirmed corrosive substance.

This product contains less than the amount of hydrochloric acid which is considered a hazardous substance according to Worksafe Australia, however, we anticipated that this product will cause severe eye irritation and significant skin irritation especially if the duration of exposure is prolonged or repeated. Classified as hazardous according to the criteria of Worksafe Australia

#### ACUTE HEALTH EFFECTS

##### Swallowed:

May cause irritation to mouth, throat and stomach with effects including mucous build up, irritation to the tongue and lips and pains in the stomach. Swallowing of large quantities may result in nausea, vomiting and diarrhoea.

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### 11. TOXICOLOGICAL INFORMATION (continued)

**Eye:**

Will cause severe irritation to the eyes, with effects including: tearing, pain, stinging and blurred vision. If the product is not removed promptly corneal injury may occur.

**Skin:**

Will cause irritation to the skin, with effects including; Redness and itchiness. The product is not anticipated to be absorbed through the skin.

**Inhaled:**

May cause irritation to the nose, throat and respiratory system. However, this is only anticipated to occur if the product is heated.

**Chronic:**

Prolonged or repeated skin contact may lead to drying / defatting and possible dermatitis in some susceptible individuals.

**Reagent B****ACUTE HEALTH EFFECTS****Swallowed:**

May cause irritation to mouth, throat and stomach. Swallowing of large quantities may result in nausea, vomiting and diarrhoea.

**Eye:**

Will cause irritation to the eyes, with effects including: tearing, pain, stinging and blurred vision. If the product is not removed promptly some type of permanent injury may occur.

**Skin:**

Will cause irritation to the skin, with effects including; Redness and itchiness. The product is not anticipated to be absorbed through the skin.

**Inhaled:**

May cause irritation to the nose, throat and respiratory system. However, this is only anticipated to occur if the product is heated.

**Chronic:**

Information from the available literature indicates that exposure to 2-amino-2-methyl-1-propanol will cause changes in uterine weight, respiratory stimulation, somnolence, potential coma and death in extremely high doses in experimental animals.

**2-AMINO-2-METHYL-1-PROPANOL**

Oral LD50(rat): 2,900 mg/kg

Dermal LD50(rabbit): > 5,000 mg/kg

Inhalation LC50(rat): 230 ug/m<sup>3</sup>/4H/13W intermittent

### 12. ECOLOGICAL INFORMATION

**Ecotoxicity:**

No information for product.

**Mobility:**

No information for product.

**Persistence / Degradability:****Reagent A**

pH will be neutralized slowly by natural alkalinity and carbon dioxide. May prevent coagulation by some agents through pH reduction.

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### 12. ECOLOGICAL INFORMATION (continued)

**Reagent B**

No information for product.

**Chemical Fate Information:**

No information available.

Do not dispose of large quantities to waterways, drains or sewers.

### 13. DISPOSAL CONSIDERATIONS

Refer to appropriate authority in your State. Dispose of material through a licensed waste contractor.

### 14. TRANSPORT INFORMATION

**Reagent A****Road and Rail Transport:**

Not classified as a Dangerous Good according to the United Nations Recommendations for the Transport of Dangerous Goods and Globally Harmonized System for the classification and labelling of Chemicals.

**Marine Transport:**

Not classified as a Dangerous Good according to the International Maritime Organization Rules (Maritime Dangerous Goods Code - IMDG Code) for transport by sea.

**Air Transport:**

**PROPER SHIPPING NAME:** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.(HYDROCHLORIC ACID)

**UN No:** UN3264

**CLASS:** 8

**PACK GROUP:** III

**LABEL:** Corrosive

**Reagent B****Road and Rail Transport:**

Not classified as a Dangerous Good according to the United Nations Recommendations for the Transport of Dangerous Goods and Globally Harmonized System for the classification and labelling of Chemicals.

**Air Transport:**

Not classified as a Dangerous Good according to the International Civil Aviation Organization (ICAO) and International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

**Marine Transport:**

Not classified as a Dangerous Good according to the International Maritime Organization Rules (Maritime Dangerous Goods Code - IMDG Code) for transport by sea.

### 15. REGULATORY INFORMATION

**Poison Schedule:** None allocated.

**Inventory Status:**

Australia (AICS)	Y
United States (TSCA)	Y
Canada (DSL)	Y
Europe (EINECS/ELINCS)	Y
Japan (MITI)	Y
South Korea (KECL)	Y

Y = all ingredients are on the inventory.

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### 16. OTHER INFORMATION

Issue date: July, 2004

#### Key Legend Information:

NOHSC - National Occupational Health & Safety Commission [Aust]

TWA - Time Weighted Average [Int]

STEL - Short Term Exposure Limit [Int]

AICS - Australian Inventory of Chemical Substances

EPA - Environmental Protection Agency [Int]

NIOSH - National Institute for Occupational Safety and Health [US]

AS/NZS 1715 - Selection, use and maintenance of respiratory protective devices. [Aust]

AS/NZS 1716 - Respiratory protective devices. [Aust]

IATA - International Aviation Transport Authority [Int]

ICAO - International Civil Aviation Organization

IMO - International Maritime Organisation. [Int]

IMDG - International Maritime Dangerous Goods

United Nations Recommendations for the Transport of Dangerous Goods and Globally Harmonized System for the classification and labelling of Chemicals. [Int]

EU - European Union

[Aust/NZ] = Australian/New Zealand

[Int] = International

[US] = United States of America

#### Principal References:

Information supplied by manufacturer, reference sources including the public domain.

#### Disclaimer

This MSDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

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**END OF MSDS**