# Material Safety Data Sheet

## Creatinine

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Creatinine
**Catalog Numbers:** 1430-250, 1430-500
**Use:** This reagent comprises a two component system that is intended for in vitro quantitative determination of Creatinine in human serum, plasma or urine.


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1-800-255-3924


## 2. HAZARD IDENTIFICATION

**Base Reagent &Picric Acid reagent**

CLASSIFIED AS HAZARDOUS ACCORDING TO EU CRITERIA

**Hazard Classification:** HAZARDOUS SUBSTANCE, DANGEROUS GOODS (By air).

**Hazard Category: Irritant**

**RISK PHRASES**
R38 Irritating to skin
R41 Risk of serious damage to eyes.

**SAFETY PHRASES**
S24/25 Avoid contact with skin and eyes.

**Poison Schedule:** None allocated.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

**Base Reagent**

| SUBSTANCE NAME | Proportion | CAS Number |
|---|---|---|
| SODIUM HYDROXIDE | 1 - 2 % | 1310-73-2 |
| WATER AND OTHER NON HAZARDOUS INGREDIENTS | Balance | Mixture |

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

**Picric Acid Reagent**

| SUBSTANCE NAME | Proportion | CAS Number |
|---|---|---|
| PICRIC ACID | < 1 % | 88-89-1 |
| 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 victim is conscious give glass of water to drink. Immediately transport to hospital or doctor.

## 4. FIRST AID MEASURES (continued)

**Eye:**
If material is splashed into eyes, immediately, flush with plenty of water for 15 minutes, ensuring eye lids are held open. Immediately 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

**Fire/Explosion Hazard**
If safe to do so, move undamaged containers from fire area.
**Hazardous Decomposition Products:** Decomposes on heating emitting noxious smoke.
**Fire Fighting Procedures:** Fire fighters to wear Self-contained breathing apparatus (SCBA) in confined spaces, in oxygen deficient atmospheres or if exposed to products of decomposition. Full protective clothing is also recommended.
**Extinguishing Media:** Use extinguishing media suitable for surrounding fire situation.

**Flammability**
This material is not a flammable or combustible liquid.

## 6. ACCIDENTAL RELEASE MEASURES

Material may be slippery when spilt. Walk cautiously. Ventilate area. Wear protective equipment to prevent skin and eye contact, as outlined under personal protection in this MSDS. Bund area using vermiculite - to prevent run off into drains and waterways. Place absorbent (vermiculite or other inert material) onto spill. Collect and seal in properly labeled containers for disposal. Remainder of material may be neutralized by cautiously adding vinegar. Collect this material after foaming/effervescence ceases and place into above labeled container.

## 7. HANDLING AND STORAGE

Store in a cool place and out of direct sunlight. Store away from sources of heat or ignition. Store away from strong acids. Keep containers closed, when not using the product. Store at 15-30°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

**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:

**Base Reagent**
**SODIUM HYDROXIDE**
(Worksafe Australia)
**[TWA]** 2 mg/m³
**[STEL]** Peak limitation
**Notices**: H
**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

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION (continued)

concentrations and so the exposure standard for these substances represents a maximum or "peak concentration" to which workers may be exposed.

**Engineering Controls**

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

**Personal Protection Equipment**

**GLOVES:** Not normally required, however, if product has spilt, or package is broken, then the use of neoprene gloves is recommended.

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

**RESPIRATORY PROTECTION:** Avoid breathing of vapours. 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.

**Picric Acid Reagent**

**PICRIC ACID**
(Worksafe Australia)
[TWA] 0.1 mg/m³
**Notices**: H

**Engineering Controls**

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

**Personal Protection Equipment**

**GLOVES:** Not normally required, however, if product has spilt, or package is broken, then the use of neoprene gloves is recommended.

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

**RESPIRATORY PROTECTION:** Avoid breathing of vapours. 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.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| | **Base Reagent** | **Picric Acid Reagent** |
|---|---|---|
| **Appearance:** | Clear liquid with no odour. | Clear yellow liquid with no odour. |
| **Boiling Point:** | Not available. | Not available. |
| **Freezing Point:** | Not available. | Not available. |
| **Vapour Pressure:** | Not available. | Not available. |
| **Specific Gravity:** | Not available. | Not available. |
| **Flash Point:** | Not applicable. | Not applicable. |
| **Flammability Limits:** | Not applicable. | Not applicable. |
| **Solubility in Water:** | Completely miscible. | Completely miscible. |
| **Other Properties** | | |
| **pH:** | > 12.0 @ 18 - 22°C | < 2.0 @ 18 - 22°C |

## 10. STABILITY AND REACTIVITY

**STABILITY:**

Stable under normal conditions of use.

**HAZARDOUS DECOMPOSITION PRODUCTS:**

**Base Reagent**

Decomposes on heating emitting noxious smoke.

## 10. STABILITY AND REACTIVITY (continued)

**Picric Acid Reagent**
Decomposes on heating emitting oxides of carbon and oxides of nitrogen.

**HAZARDOUS POLYMERIZATION:**
Will not occur.

**INCOMPATIBILITIES:**
**Base Reagent**
Strong mineral acids (sulfuric, nitric and hydrochloric).

**Picric Acid Reagent**
Strong oxidizing agents, heavy metals (lead, tin etc).

**CONDITIONS TO AVOID:**
Incompatibles.

## 11. TOXICOLOGICAL INFORMATION

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

**Sodium hydroxide:**

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 sodium hydroxide is a confirmed corrosive substance.

This product contains less than 2 % of sodium hydroxide which is considered to be below the Worksafe Australia cut-off for being a corrosive substance, 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.

**Picric Acid Reagent**
There is no toxicological information available for this product, however, for the ingredient:

**Picric acid:**
Oral LD50(rat): 200 mg/kg

Picric acid dust will cause severe irritation and is a suspected skin allergen. Due to the low concentration of picric acid in this product, it is not anticipated to cause allergic skin reactions. The systemic poisoning following the absorption of picric acid causes, headaches and vertigo, there may be a darkened or port wine coloured urine and albuminuria. High doses caused destruction of the erythrocytes and produce gastroenteritis, hemorrhagic nephritis and acute hepatitis.

**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.

**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.

## 12. ECOLOGICAL INFORMATION

No information is available for this product, however, for sodium hydroxide component:

**Water pollution**:
**Persistency**: Can persist for extended periods of time.
**Effect on water treatment process**: Can raise pH and interfere with coagulation.

Avoid contaminating drains, sewers or waterways.

## 13. DISPOSAL CONSIDERATIONS

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

## 14. TRANSPORT INFORMATION

**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:**
**Base Reagent**
**PROPER SHIPPING NAME:** CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.(SODIUM HYDROXIDE)
**UN No:** UN3266
**CLASS:** 8
**PACK GROUP:** III
**LABEL:** Corrosive

**Picric Acid Reagent**
**PROPER SHIPPING NAME:** CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.(PICRIC ACID)
**UN No:** UN3265
**CLASS:** 8
**PACK GROUP:** III
**LABEL:** Corrosive

## 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.

## 16. OTHER INFORMATION

Issue date: June, 2004

**Key Legend Information:**
NOHSC - National Occupational Health & Safety Commission [Aust]
TWA - Time Weighted Average [Int]
STEL - Short Term Exposure Limit [Int]

## 16. OTHER INFORMATION (continued)

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 protectice 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. Our responsibility for products sold is subject to our standard terms and conditions which are available on request.



**END OF MSDS**