*1. Identification of the substance/preparation and of the company/undertaking

Product details

Trade name: Biuret Total Protein Reagent

Catalogue number: 123, ABC

Application of the substance / the preparation: In vitro diagnostic reagent.

Manufacturer/Supplier:

ChemHaz Solutions,
Laccaroe,
Feakle,
Co. Clare.
Email: info@chemhazsolutions.com

Further information obtainable from: www.chemhazsolutions.com

Information in case of emergency (8:30am - 6:00pm)**:**

Telephone +353 61 924146

*2. Hazards identification

Hazard description:

C Corrosive

Information concerning particular hazards for human and environment:

R34 Causes burns.

R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

*3. Composition/information on ingredients

Chemical characterisation

Description:

In vitro diagnostic reagent.

Aqueous preparation containing the hazardous components listed below.

Dangerous components:

Component	CAS No.	EINECS No.	Classification	Concentration
Sodium Hydroxide	1310-73-2	215-185-5	C; R-35	2-5%
Copper Sulphate	7758-98-7	231-847-6	Xn, N; R 22-36/38-50/53	0.5 – 1.0%

Additional information: For the wording of the listed risk phrases refer to section 16.

4. First-aid measures

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact:

Immediately wash with soap and water and rinse thoroughly. If possible, also wash with polyethylene glycol 400. Remove soiled clothing. Then consult a doctor.

After eye contact:

Immediately rinse opened eye for several minutes under running water. Then consult a doctor.

After swallowing:

Make victim drink plenty of water; avoid vomiting (risk of perforation!). Immediately call a doctor. Do not attempt to neutralize.

5. Fire-fighting measures

Suitable extinguishing agents:
CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use fire-extinguishing methods suitable to surrounding conditions.
Special hazards caused by the substance, its products of combustion or resulting gases:
In case of fire, the following can be released:
Hazardous vapours
Sulphur oxides (SOx)
Protective equipment: Wear full protective suit and self-contained respiratory protective device.
Additional information Non-combustible

6. Accidental release measures

Person-related safety precautions:
Isolate spillage and clean up immediately.
Refer to Sections 7 & 8 for protective measures when handling the spillage.
Measures for environmental protection:
Do not allow to enter sewers/surface or ground water.
Measures for cleaning/collecting:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose of contaminated material as waste according to Section 13.
Rinse off area with water.

7. Handling and storage

Information for safe handling:
Observe the general safety regulations when handling chemicals.
Avoid contact with the eyes, skin and mucous membranes.
Storage: Store in original container at 2...25°C.
Requirements to be met by storerooms and receptacles: No special requirements.

8. Exposure controls/personal protection

Ingredients with limit values that require monitoring in the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored in the workplace.
Additional information:
The lists valid during the creation of this MSDS were used as a basis for this assessment.
Personal protective equipment:
General protective and hygienic measures:
Adhere to Good Laboratory Practices (GLP).
Wash hands before breaks and at the end of work.
Protection of hands:
Disposable gloves
Material of gloves Latex/Natural rubber (NR)
Penetration time of glove material
Gloves providing minimal protection are sufficient when the product is handled in accordance with the instructions for use.
Eye protection: Safety glasses
Body protection: Lab coat

9. Physical and chemical properties

General Information
Form: Liquid
Colour: Blue
Odour: Odourless
Change in condition
Melting point/Melting range: Similar to water, approximately 0°C.
Boiling point/Boiling range: Similar to water, approximately 100°C.
Flash point: Not applicable.
Self-igniting: Product is not self-igniting.
Danger of explosion: Product does not present an explosion hazard.
Vapour pressure: Similar to water, approximately 23 hPa.
Density at 20°C: 1.03 g/cm³
Solubility in/Miscibility with water: Fully miscible.
pH-value at 20°C: >13

10. Stability and reactivity

Stability: The product is stable in accordance with the recommended storage conditions.
Materials to be avoided:
ammonium compounds, formation of ammonia
metals, light metals: formation of hydrogen (risk of explosion!)
concentrated acids
Hazardous reactions: No dangerous reactions known.
Hazardous decomposition products: No dangerous decomposition products known.

11. Toxicological information

Acute toxicity:
LD/LC50 values relevant for classification:
1310-73-2 sodium hydroxide
Oral LD50 2000 mg/kg (rat)
Primary effects:
After skin contact: Caustic effect.
After eye contact: Caustic effect.
After ingestion:
Swallowing will lead to a caustic effect on mouth, throat, oesophagus and gastrointestinal tract.
Sensitization: No sensitizing effects known.

12. Ecological information

Ecotoxic effects:
Aquatic toxicity:
Toxic effect on fish and plankton.
Harmful effect due to pH shift.
The product contains materials that are harmful to the environment.
7758-98-7 copper sulphate

EC50 (4 h)	0.1 mg/l (algae)
EC50 (48 h)	0.024 mg/l (Daphnia)
LC50 (96 h)	0.1-2.5 mg/l (fish)

13. Disposal considerations

Product:

Chemical residues and remains should be routinely handled as special waste. This must be disposed of incompliance with anti-pollution and other laws of the country concerned. To ensure compliance we recommend that you contact the relevant (local) authorities and/or an approved waste-disposal company for information.

European waste catalogue

18 01 06 chemicals consisting of or containing dangerous substances

Packaging:

Disposal must be made in accordance with local waste management regulations.
Contaminated packaging must be disposed of in the same manner as the product.
Non-contaminated packaging materials may be recycled. Contact your local service providers for further information.

14. Transport information

Land transport ADR/RID (cross-border)

ADR/RID class: 8 Corrosive substances.
Danger code (Kemler): 80
UN-Number: 3266
Packaging group: II
Hazard label 8
Description of goods: 3266 CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Contains Sodium Hydroxide)

Maritime transport IMDG:

IMDG Class: 8
UN Number: 3266
Label 8
Packaging group: II
EMS Number: F-A, S-B
Marine pollutant: No
Proper shipping name: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Contains Sodium Hydroxide)

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: 8
UN/ID Number: 3266
Label 8
Packaging group: II
Proper shipping name: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Contains Sodium Hydroxide)

15. Regulatory information

Labelling according to EU guidelines:

The product has been classified and marked in accordance with EU Directives/Ordinance on Hazardous Materials.

Code letter and hazard designation of product:

 C Corrosive

Hazard-determining components of labelling:

Sodium hydroxide

Risk phrases:

34 Causes burns.
52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Safety phrases:

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
60 This material and its container must be disposed of as hazardous waste.
61 Avoid release to the environment. Refer to special instructions/safety data sheets.

16. Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Relevant R-phrases

22 Harmful if swallowed.
35 Causes severe burns.
36/38 Irritating to eyes and skin.
50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Reason for update: Revision according to REACH Regulation (EC) No. 1907/2006, Annex II

***** Indicates altered section

Prepared by: Dr. J. J. Tobin**,** ChemHaz Solutions