

Material Safety Data Sheet

Printing date 10/28/2008

Reviewed on 10/28/2008

1 Identification of substance:· **Product details:**· **Trade name:** Precision Plus Protein Kaleidoscope Standards· **Catalog or product number:** 1610375, 1610375S, 1610375EDU· **Application of the substance / the preparation** Laboratory chemicals· **Manufacturer/Supplier:**

Bio-Rad Laboratories, Life Science Group

2000 Alfred Nobel Drive

Hercules, California 94547

(510)741-1000

· **Information department:** Technical services, customer support.· **Emergency information:**

1(800)424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION or ACCIDENT.

510-741-1000

2 Composition/Information on components:· **Chemical characterization**· **Description:** Mixture of the substances listed below with non-hazardous additions.· **Listing of dangerous and non-hazardous components:**

CAS: 7732-18-5 EINECS: 231-791-2 RTECS: ZC 0110000	water	50-100%
CAS: 56-81-5 EINECS: 200-289-5 RTECS: MA 8050000	glycerol	20-35%
CAS: 151-21-3 EINECS: 205-788-1 RTECS: WT 1050000	sodium dodecyl sulphate Xn, Xi; R 20/22-36/37/38-42 Danger: Skull and crossbones 3.1.I/3, 3.1.O/4, 3.2/2, 3.3/2A, 3.8/3; Health hazard 3.4.R/1	1.0-2.5%

· **Additional information** For the wording of the listed risk phrases refer to section 15.**3 Hazards identification**· **Emergency overview:**

Sensitizer by inhalation.

Irritant to respiratory system and skin.

Xn Harmful

· **Routes of exposure:** Inhalation· **Information pertaining to particular dangers for man and environment**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 42 May cause sensitization by inhalation.

· **Classification system**

The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.

The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.

· **GHS label elements**Health hazard **Danger**

3.4/1 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.

(Contd. on page 2)

USA

Material Safety Data Sheet

Printing date 10/28/2008

Reviewed on 10/28/2008

Trade name: Precision Plus Protein Kaleidoscope Standards

(Contd. of page 1)

· **Prevention:**

Avoid breathing dust/fume/gas/mist/vapours/spray.
In case of inadequate ventilation wear respiratory protection.

· **Response:**

IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

· **Disposal:**

Dispose of contents/container in accordance with local/regional/national/international regulations.

* **4 First aid measures**

- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact** Generally the product does not irritate the skin.
- **After eye contact** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing** Induce vomiting and call for medical help.

* **5 Fire fighting measures**

- **Suitable extinguishing agents** Use fire fighting measures that suit the environment.
- **Protective equipment:** No special measures required.

* **6 Accidental release measures**

- **Person-related safety precautions:** Not required
- **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).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.

* **7 Handling and storage**

- **Handling**
- **Information for safe handling:**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
No special precautions are necessary if used correctly.
- **Information about protection against explosions and fires:** No special measures required.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** According to product specification
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.

* **8 Exposure controls and personal protection**

- **Additional information about design of technical systems:** No further data; see item 7.

(Contd. on page 3)

Material Safety Data Sheet

Printing date 10/28/2008

Reviewed on 10/28/2008

Trade name: Precision Plus Protein Kaleidoscope Standards

(Contd. of page 2)

· Components with limit values that require monitoring at the workplace:

56-81-5 glycerol

PEL () 15* 5** mg/m³
 *total dust **respirable fraction
 TLV () 10 ppm

26628-22-8 sodium azide

REL () Short-term value: C 0.3** mg/m³, C 0.1* ppm
 *as HN₃ vapor; **as NaN₃; Skin
 TLV () Short-term value: C 0.29** mg/m³, C 0.11* ppm
 *as HN₃ vapor **as NaN₃

· **Additional information:** The lists that were valid during the creation were used as basis.· **Personal protective equipment**· **General protective and hygienic measures**

Keep away from foodstuffs, beverages and feed.
 Wash hands before breaks and at the end of work.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:** Protective gloves.· **Material of gloves:** Synthetic gloves· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Safety glasses**9 Physical and chemical properties:**· **General Information**

Form: liquid
Color: Violet
Odor: Rotten

· **Change in condition**

Melting point/Melting range: undetermined
Boiling point/Boiling range: 100°C

· **Flash point:** > 100°C

· **Ignition temperature:** 400°C

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower: 0.9 Vol %

· **Vapor pressure at 20°C:** 23 hPa

· **Density:** Not determined

· **Solubility in / Miscibility with**

Water: Not miscible or difficult to mix

(Contd. on page 4)

USA

Material Safety Data Sheet

Printing date 10/28/2008

Reviewed on 10/28/2008

Trade name: Precision Plus Protein Kaleidoscope Standards

(Contd. of page 3)

· pH-value at 20°C:	6.8
· Solvent content:	
· Organic solvents:	30.0 %
· Water:	66.2 %
· Solids content:	3.8 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known
- **Dangerous products of decomposition:** No dangerous decomposition products known

11 Toxicological information

- **Acute toxicity:**

- **LD/LC50 values for hazardous components per OSHA criteria:**

151-21-3 sodium dodecyl sulphate

Oral	LD50	1288 mg/kg (rat)
Dermal	LD50	580 mg/kg (rab)

- **Primary irritant effect:**

- **on the skin:** No irritant effect.

- **on the eye:** No irritant effect.

- **Sensitization:** Sensitization possible through inhalation.

- **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Harmful

- **Target organs:** Respiratory tract.

12 Ecological information:

- **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

13 Disposal considerations

- **Product:**

- **Recommendation**

Hand over to hazardous waste disposers.

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

(Contd. on page 5)

USA

Material Safety Data Sheet

Printing date 10/28/2008

Reviewed on 10/28/2008

Trade name: Precision Plus Protein Kaleidoscope Standards

(Contd. of page 4)

- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

* 14 Transport information

- **DOT regulations:**
- **Hazard class:** -
- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -
- **UN "Model Regulation":** -

* 15 Regulations

- **SARA (Superfund Amendments and Reauthorization Act of 1986 - USA)**

- **Section 302/304 (40CFR355.30 / 40CFR355.40):**

None of the ingredients is listed.

- **Section 313 (40CFR372.65):**

None of the ingredients is listed.

- **TSCA (Toxic Substances Control Act):**

7732-18-5 water

56-81-5 glycerol

151-21-3 sodium dodecyl sulphate

27565-41-9 (R*,R*)-(±)-1,4-dimercaptobutane-2,3-diol

77-86-1 Tris(hydroxymethyl)aminomethane

26628-22-8 sodium azide

115-39-9 tetrabromophenol blue

- **Carcinogenicity categories**

- **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **TLV (Threshold Limit Value established by ACGIH)**

26628-22-8 sodium azide

A4

(Contd. on page 6)

Material Safety Data Sheet

Printing date 10/28/2008

Reviewed on 10/28/2008

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(Contd. of page 5)

· **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

· **Markings according to EU guidelines:**

Observe the general safety regulations when handling chemicals

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

· **Code letter and hazard designation of product:**

Xn Harmful

· **Hazard-determining components of labelling:**

sodium dodecyl sulphate

· **Risk phrases:**

42 May cause sensitization by inhalation.

· **Safety phrases:**

23 Do not breathe gas/fumes/vapour/spray.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

36 Wear suitable protective clothing.

45 In case of accident or if you feel unwell, seek medical advice immediately.

60 This material and its container must be disposed of as hazardous waste.

· **National regulations**

Class	Share in %
NK	20-35

· **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.**16 Other information:**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing MSDS:** Environmental Health and Safety.· **Contact:**

Life Science Group, Environmental Health and Safety, 2000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 741-1000

Diagnostic Group, Environmental Health and Safety, 4000 Alfred Nobel Drive, Hercules, California, 94547: 1(510) 724-7000

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Reglement internationale concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

(Contd. on page 7)



Material Safety Data Sheet

Printing date 10/28/2008

Reviewed on 10/28/2008

Trade name: Precision Plus Protein Kaleidoscope Standards

(Contd. of page 6)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

*** Data compared to the previous version altered.**