

Material Safety Data Sheet

Printing date 02/24/2012

Reviewed on 01/26/2012

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** Substrate Activator Solution
- **Catalog or product number:** 532-5222
- **Application of the substance / the preparation** In-vitro laboratory reagent or component
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Bio-Rad Laboratories, Diagnostic Group
4000 Alfred Nobel Drive
Hercules, California 94547 1(510)724-7000
- **Information department:**
Technical services, customer support
TechsupportUSSD@bio-rad.com
- **Emergency telephone number:**
1(800) 424-9300 Use only in the event of a CHEMICAL EMERGENCY involving a SPILL, LEAK, FIRE, EXPLOSION, or ACCIDENT.

2 Composition/information on ingredients

- **Chemical characterization:** Substances
- **CAS No. Description:**
7732-18-5 water
- **Identification number(s):**
- **EC number:** 231-791-2
- **Additional information:** For the wording of the listed risk phrases refer to section 15.

Listing of dangerous and non-hazardous components:

26628-22-8	sodium azide	T+ R28 N R50/5 3 R32	0.01-0.1%
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3 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**
Xn; Harmful
R22: Harmful if swallowed.
R32: Contact with acids liberates very toxic gas.
- **Information concerning particular hazards for human and environment:** not applicable
- **Classification system:**
The classification was made according to OSHA 29CFR 1910.1200 and 1910.1030, and is expanded upon from company and/or literature information.
- **Label elements**
- **Labelling 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

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

Xn Harmful

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

sodium azide

· **Risk phrases:**

22 Harmful if swallowed.

32 Contact with acids liberates very toxic gas.

· **Safety phrases:**

36 Wear suitable protective clothing.

· **Emergency overview:**· **Routes of exposure:** Ingestion· **Classification system**· **NFPA ratings (scale 0-4)**

Health = 2

Fire = 0

Reactivity = 0

* **4 First aid measures**· **General information**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **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.· **After swallowing** Immediately call a doctor.* **5 Firefighting measures**· **Suitable extinguishing agents**CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.· **Special hazards arising from the substance or mixture** No further relevant information available.· **Protective equipment:** Mount respiratory protective device.* **6 Accidental release measures**· **Personal precautions, protective equipment and emergency procedures** Mount respiratory protective device.· **Environmental precautions:** Dilute with plenty of water.· **Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

· **Reference to other sections**

See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

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7 Handling and storage

- **Handling**
- **Precautions for safe handling** 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:** Do not store together with acids.
- **Further information about storage conditions:** None.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

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

- **Components with limit values that require monitoring at the workplace:**

26628-22-8 sodium azide

REL (United States)	Short-term value: C 0.3** mg/m ³ , C 0.1* ppm *as HN ₃ vapor; **as NaN ₃ ; Skin
TLV (United States)	Short-term value: C 0.29** mg/m ³ , C 0.11* ppm *as HN ₃ vapor **as NaN ₃

- **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:** Not required.
- **Protection of hands:** Protective gloves.
- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
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**
- **Appearance:**

Form:	Liquid
Color:	Colorless
Odor:	Odorless
- **pH-value at 20°C:** 4.5

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- **Change in condition**
Melting point/Melting range: 0°C
Boiling point/Boiling range: 100°C
- **Flash point:** *Not applicable*
- **Danger of explosion:** *Product does not present an explosion hazard.*
- **Vapor pressure at 20°C:** *23 hPa*
- **Density at 20°C:** *1 g/cm³*
- **Solubility in / Miscibility with Water:** *Fully miscible*
- **Solvent content:**
Organic solvents: 0.0 %
Water: 99.8 %
- **Solids content:** *1.0 %*
- **Other information** *No further relevant information available.*

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** *No decomposition if used according to specifications.*
- **Incompatible materials:** *No further relevant information available.*
- **Hazardous decomposition products:** *No dangerous decomposition products known*

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
on the skin: No irritant effect.
on the eye: No irritant effect.
- **Sensitization:** *No sensitizing effects known.*

12 Ecological information

- **Aquatic toxicity:** *No further relevant information available.*
- **Persistence and degradability** *No further relevant information available.*
- **Behavior in environmental systems:**
- **Bioaccumulative potential** *No further relevant information available.*
- **Additional ecological information:**
- **General notes:** *Generally not hazardous for water.*

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13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
 Can be disposed of with household garbage with prior chemical-physical or biological treatment following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations. Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Flush pipes with water frequently if discarding solutions containing sodium azide into metal piping systems.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· UN-Number	Void
· DOT, ADR, ADN, IMDG, IATA	Void
· UN proper shipping name	Void
· DOT, ADR, ADN, IMDG, IATA	Void
· Transport hazard class(es)	
· ADR, ADN, IMDG, IATA	
· Class	Void
· Packing group	
· DOT, ADR, IMDG, IATA	Void
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· IATA	
· Remarks:	This package contains dangerous goods in small quantities and is in all respects in compliance with the applicable international and national government regulation and the IATA Dangerous Goods Regulations.

15 Regulatory information

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

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

26628-22-8 sodium azide

· **Section 313 (40CFR372.65):**

26628-22-8 sodium azide

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· TSCA (Toxic Substances Control Act):

7732-18-5	water
26628-22-8	sodium azide
63148-62-9	Silicone oil
9004-67-5	Methly Cellulose Cell Culture Tested

· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

7664-93-9	sulphuric acid	1
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· NTP (National Toxicology Program)

7664-93-9	sulphuric acid	K
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· OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

· National regulations

· Water hazard class: Generally not 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

· * Data compared to the previous version altered.