

Safety Data Sheet
acc. to OSHA HCS

Printing date 06/03/2015

Reviewed on 05/17/2015

1 Identification

- **Product identifier**
- **Trade name: D-100 Cleaning Tube**
- **Catalog or product number:** 290-1008
- **Application of the substance / the mixture** *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: Mixtures**
- **Description:** *Mixture of the substances listed below with non-hazardous additions.*

· **Listing of dangerous and non-hazardous components:**

141-43-5	2-aminoethanol	2.5-5%
	Ethoxylated Alcohol surfactant	2.5-5%
9003-11-6	Polypropylene oxide-propylene glycol	2.5-5%
56-81-5	glycerol	2.5-5%
9014-01-1	Subtilisin	0.1-1.0%
50-00-0	formaldehyde	.001-.01%
7732-18-5	water	50-100%

- **Additional information** *For the wording of the listed risk phrases refer to section 15.*

3 Hazard(s) identification

- **Classification of the substance or mixture**
Skin Corr. 1B H314 Causes severe skin burns and eye damage.
Eye Dam. 1 H318 Causes serious eye damage.
Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
STOT SE 3 H335 May cause respiratory irritation.

· **Label elements**

- **GHS label elements** *The product is classified and labeled according to the Globally Harmonized System (GHS).*

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Hazard pictograms



GHS05 GHS07 GHS08

Signal word Danger

Hazard-determining components of labeling:

2-aminoethanol

Subtilisin

Ethoxylated Alcohol surfactant

Hazard statements

H314 Causes severe skin burns and eye damage.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+P311 IF exposed or concerned: Call a poison center/doctor.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Emergency overview:

Routes of exposure: Inhalation

4 First-aid measures

- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After eye contact** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing** Rinse mouth with water. Seek medical attention and appropriate follow-up.

5 Fire-fighting 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:** Wear self-contained respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **Environmental precautions:**
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.

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- **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.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **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:** Keep receptacle tightly sealed.
- **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:

141-43-5 2-aminoethanol

PEL (United States)	Long-term value: 6 mg/m ³ , 3 ppm
REL (United States)	Short-term value: 15 mg/m ³ , 6 ppm Long-term value: 8 mg/m ³ , 3 ppm
TLV (United States)	Short-term value: 15 mg/m ³ , 6 ppm Long-term value: 7.5 mg/m ³ , 3 ppm

56-81-5 glycerol

PEL (United States)	Long-term value: 15* 5** mg/m ³ *total dust **respirable fraction
TLV (United States)	TLV withdrawn-insufficient data human occup. exp.

9014-01-1 Subtilisin

REL (United States)	Short-term value: 0.00006* mg/m ³ *60-min
TLV (United States)	Long-term value: C 0.00006 mg/m ³ as crystalline active enzyme

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50-00-0 formaldehyde

PEL (United States)	Short-term value: 2 ppm Long-term value: 0.75 ppm see 29 CFR 1910.1048(c)
REL (United States)	Short-term value: C 0.1* ppm Long-term value: 0.016 ppm *15-min; See Pocket Guide App. A
TLV (United States)	Short-term value: C 0.37 mg/m ³ , C 0.3 ppm SEN

67-56-1 methanol

PEL (United States)	Long-term value: 260 mg/m ³ , 200 ppm
REL (United States)	Short-term value: 325 mg/m ³ , 250 ppm Long-term value: 260 mg/m ³ , 200 ppm Skin
TLV (United States)	Short-term value: 328 mg/m ³ , 250 ppm Long-term value: 262 mg/m ³ , 200 ppm Skin; BEI

· Ingredients with biological limit values:**67-56-1 methanol**

BEI (United States)	15 mg/L Medium: urine Time: end of shift Parameter: Methanol (background, nonspecific)
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- **Additional information:** The lists that were valid during the creation were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures**
The usual precautionary measures for handling chemicals should be followed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the skin.
- **Breathing equipment:**
Not necessary if room is well-ventilated. Adequate ventilation required.
Use suitable respiratory protective device only when aerosol or mist is formed.
- **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
- **Body protection:** Protective work clothing.

9 Physical and chemical properties**· General Information****· Appearance:**

Form: Liquid
Color: Clear

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· Odor:	Odorless
· Odour threshold:	Not determined.
· pH-value at 20 °C:	7-9
· Change in condition	
Melting point/Melting range:	undetermined
Boiling point/Boiling range:	undetermined
· Flash point:	Not applicable
· Flammability (solid, gaseous)	Not applicable.
· Ignition temperature:	385 °C
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure at 20 °C:	23 hPa
· Density:	Not determined
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
Water:	Fully miscible
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
dynamic:	Not determined.
kinematic:	Not determined.
· Solvent content:	
Organic solvents:	10.0 %
Water:	79.0 %
Solids content:	10.0 %
· 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

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11 Toxicological information

· **Acute toxicity:**

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

141-43-5 2-aminoethanol

Oral	LD50	2050 mg/kg (rat)
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Dermal	LD50	1000 mg/kg (rbt)
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9014-01-1 Subtilisin

Oral	LD50	2000 mg/kg (rat)
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· **Primary irritant effect:**

· **on the skin:**

Strong caustic effect on skin and mucous membranes.

Irritant to skin and mucous membranes.

· **on the eye:** 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

Irritant

· **Carcinogenic categories**

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

50-00-0	formaldehyde	1
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· **NTP (National Toxicology Program)**

50-00-0	formaldehyde	R
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· **OSHA-Ca (Occupational Safety & Health Administration)**

50-00-0	formaldehyde	
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· **Target organs:** Respiratory tract.

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:**

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

· **Waste treatment methods**

· **Recommendation** Dispose of waste in accordance to applicable national, regional, or local regulations.

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- **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**
- **DOT, ADR, ADN, IMDG, IATA** Void
- **UN proper shipping name**
- **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.
- **UN "Model Regulation":** -

15 Regulatory information

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

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

50-00-0 formaldehyde

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

50-00-0 formaldehyde

67-56-1 methanol

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

141-43-5 2-aminoethanol

9003-11-6 Polypropylene oxide-propylene glycol

56-81-5 glycerol

9014-01-1 Subtilisin

50-00-0 formaldehyde

67-56-1 methanol

7732-18-5 water

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· **California Proposition 65:**

· **Chemicals known to cause cancer:**

50-00-0	formaldehyde
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· **Developmental Toxicity**

67-56-1	methanol
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· **National regulations**

· **Technical instructions (air):**

Class	Share in %
I	1.0-2.5
NK	5-10

· **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 SDS:** 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

· **Date of preparation / last revision** 06/03/2015 / -

· **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)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B

Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1

Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

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