

Buffer PB

Version 2.2

Revision Date 10/19/2015

Print Date 03/17/2017

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION



Product name : Buffer PB

Manufacturer or supplier's detailsCompany : QIAGEN GmbH
QIAGEN Str. 1
D-40724 Hilden

Telephone : +49-02103-29-0

Responsible Department : QIAGEN Technical Service, QIAGEN Inc.,
27220 Turnberry Lane,
Valencia, CA 91355, USA,
Tel.: 1-800-DNA-PREP (1-800-362-7737),
Email: techservice-us@qiagen.comE-mail : cpc@qiagen.com
addressResponsible/issuing
personEmergency telephone : CHEMTREC
USA & Canada 1-800-424-9300**Recommended use of the chemical and restrictions on use**

Recommended use : Laboratory chemicals

SECTION 2. HAZARDS IDENTIFICATION**GHS Classification**Flammable liquids : Category 2
Skin irritation : Category 2
Eye irritation : Category 2A
Specific target organ systemic : Category 3 (Central nervous system)
toxicity - single exposure**GHS Label element**Hazard pictograms :  

Signal Word : Danger

Hazard Statements : H225 Highly flammable liquid and vapor.
H315 Causes skin irritation.

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H319 Causes serious eye irritation.
 H336 May cause drowsiness or dizziness.

Precautionary Statements : **Prevention:**
 P210 Keep away from heat/sparks/open flames/hot surfaces. -
 No smoking.
 P280 Wear protective gloves/ protective clothing/ eye
 protection/ face protection.

Potential Health Effects

Aggravated Medical Condition : None known.
 Symptoms of Overexposure : No information available.

Carcinogenicity:

IARC No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous ingredients

Chemical Name	CAS-No.	Concentration [%]
guanidine hydrochloride	50-01-1	>= 30 - < 50
2-Propanol	67-63-0	>= 20 - < 30

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
 Show this material safety data sheet to the doctor in attendance.

If inhaled : If unconscious place in recovery position and seek medical advice.
 If symptoms persist, call a physician.

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In case of skin contact	: Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.
In case of eye contact	: Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed	: If accidentally swallowed obtain immediate medical attention. Rinse mouth with water. Never give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed	: Causes skin irritation. Causes serious eye irritation. May cause drowsiness or dizziness. No information available.
Notes to physician	: No information available.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Specific hazards during fire fighting	: Do not allow run-off from fire fighting to enter drains or water courses. Exposure to decomposition products may be a hazard to health.
Hazardous combustion products	: No hazardous combustion products are known
Specific extinguishing methods	: In the event of fire and/or explosion do not breathe fumes. Use a water spray to cool fully closed containers.
Special protective equipment for fire-fighters	: Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	: Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition.
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Evacuate personnel to safe areas.
 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
 Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

- Environmental precautions : Prevent product from entering drains.
 Prevent further leakage or spillage if safe to do so.
- Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Avoid formation of aerosol.
 Do not breathe vapors/dust.
 Avoid exposure - obtain special instructions before use.
 Avoid contact with skin and eyes.
 For personal protection see section 8.
 Smoking, eating and drinking should be prohibited in the application area.
 Provide sufficient air exchange and/or exhaust in work rooms.
 Open drum carefully as content may be under pressure.
 Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
- Materials to avoid : Do not store together with oxidizing and self-igniting products.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Ingredients with workplace control parameters**

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
2-Propanol	67-63-0	TWA	200 ppm	ACGIH
		STEL	400 ppm	ACGIH
		TWA	400 ppm 980 mg/m ³	NIOSH REL
		ST	500 ppm 1,225 mg/m ³	NIOSH REL
		TWA	400 ppm 980 mg/m ³	OSHA Z-1
		TWA	400 ppm 980 mg/m ³	OSHA P0
		STEL	500 ppm	OSHA P0

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1,225 mg/m³

Biological occupational exposure limits

Component	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
2-Propanol	67-63-0	Acetone	Urine	End of shift at end of workweek	40 mg/l	ACGIH BEI

Personal protective equipment

- Respiratory protection : In the case of vapor formation use a respirator with an approved filter.
- Hand protection
Remarks : The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
- Material : Protective gloves
- Eye protection : Safety glasses
Wear face-shield and protective suit for abnormal processing problems.
Ensure that eyewash stations and safety showers are close to the workstation location.
- Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Footwear protecting against chemicals
Workers should wear antistatic footwear.
- Hygiene measures : Keep away from food and drink.
Wash hands before breaks and at the end of workday.
Ensure adequate ventilation, especially in confined areas.
Avoid contact with the skin and the eyes.
When using do not eat, drink or smoke.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : liquid
- Color : No data available
- Odor : characteristic
- Odor Threshold : No data available

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pH	: 7, neutral
Melting point/range	: No data available
Boiling point/boiling range	: No data available
Flash point	: 22 °C
Evaporation rate	: No data available
Burning rate	: No data available
Upper explosion limit	: No data available
Lower explosion limit	: No data available
Vapor pressure	: No data available
Relative vapor density	: No data available
Relative density	: No data available
Density	: 1.05 g/cm ³
Solubility(ies)	
Water solubility	: No data available
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Autoignition temperature	: not determined
Thermal decomposition	: No data available
Viscosity	
Viscosity, dynamic	: No data available
Viscosity, kinematic	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No decomposition if stored and applied as directed.
Chemical stability	: No decomposition if stored and applied as directed.
Possibility of hazardous reactions	: Stable under recommended storage conditions. Hazardous decomposition products formed under fire conditions. Vapors may form explosive mixture with air. Keep away from oxidizing agents, and acidic or alkaline products.

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Conditions to avoid : Heat, flames and sparks.

Incompatible materials : No data available

Hazardous decomposition products : No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION**Acute toxicity****Product:**

Acute oral toxicity : No data available

Acute inhalation toxicity : No data available

Acute dermal toxicity : No data available

Ingredients:**guanidine hydrochloride :**

Acute oral toxicity : LD50 Oral Rat: 1,120 mg/kg

2-Propanol :

Acute oral toxicity : LD50 Oral Rat: 5,045 mg/kg

Acute dermal toxicity : LD50 Dermal Rabbit: 12,800 mg/kg

Skin corrosion/irritation**Product:**

May irritate skin.

Ingredients:**2-Propanol:**

Species: Rabbit

Result: Mild skin irritation

Serious eye damage/eye irritation**Product:**

Remarks:

May cause irreversible eye damage.

Ingredients:**2-Propanol:**

Species: Rabbit

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Exposure time: 24 h
Result: Eye irritation

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

STOT-single exposure**Ingredients:****2-Propanol:**

Assessment: May cause drowsiness or dizziness.

STOT-repeated exposure

No data available

Aspiration toxicity

No data available

Further information**Product:**

Remarks:

Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting.,
Concentrations substantially above the TLV value may cause narcotic effects., Solvents may
degrease the skin.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

Toxicity to fish : No data available

Toxicity to algae : No data available

Toxicity to bacteria : No data available

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Ingredients:**2-Propanol :**Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 9,640 mg/l
Exposure time: 96 hToxicity to algae : EC50 (Desmodesmus subspicatus (Scenedesmus subspicatus)): 2,000 mg/l
Exposure time: 72 h**Persistence and degradability****Ingredients:****guanidine hydrochloride :**Biodegradability : Method: OECD Test Guideline 301C
Remarks:
According to the results of tests of biodegradability this product is not readily biodegradable.**Bioaccumulative potential****Product:**

Bioaccumulation : No data available

Partition coefficient: n-octanol/water : No data available

Ingredients:**guanidine hydrochloride :**

Partition coefficient: n-octanol/water : log Pow: ca. -1.7 (20 °C)

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**Waste from residues : Send to a licensed waste management company.
Dispose of as hazardous waste in compliance with local and national regulations.

Contaminated packaging : Dispose of as unused product.

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Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION**IATA-DGR**

UN/ID No. : 1219
Proper shipping name : Isopropyl alcohol
Class : 3
Packing group : II
Labels : 3

IMDG-Code

UN number : 1219
Proper shipping name : ISOPROPYL ALCOHOL
Class : 3
Packing group : II
Labels : 3
EmS Code : F-E, S-D
Marine pollutant : no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No data available

Domestic regulation**49 CFR**

UN/ID/NA number : 1219
Proper shipping name : Isopropyl alcohol
Class : 3
Packing group : II
Labels : 3
ERG Code : 129
Marine pollutant : no

Special precautions for user :

For personal protection see section 8.

SECTION 15. REGULATORY INFORMATION

TSCA list : Not relevant
Not relevant

OSHA Hazards : Flammable Liquid, Toxic by ingestion
EPCRA - Emergency Planning and Community Right-to-Know

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

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- SARA 311/312 Hazards** : Fire Hazard
Acute Health Hazard
- SARA 302** : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
- SARA 313** : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
- US State Regulations**
- California Prop 65** This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

SECTION 16. OTHER INFORMATION

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.