
1. IDENTIFICATION

Product Name	Buffer BW
Recommended use of the chemical and restrictions on use	
Identified Uses	For Research and Development Use Only
Company Identification	Covaris, Inc.
Customer Information Number	14 Gill Street, Unit H Woburn, MA 01801 (781) 932-3959
Emergency Telephone Number	(800) 424-9300 (for emergencies only)
Chemtrec Number	(800) 424-9300
Issue Date	September 25, 2013
Supersedes Date	

Safety Data Sheet prepared in accordance with OSHA's Hazard Communication Standard (29 CFR 1910.1200) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

2. HAZARD IDENTIFICATION

Hazard Classification

Flammable liquids - Category 3
Acute toxicity (oral) - Category 4
Acute toxicity (dermal) - Category 5
Serious eye damage/eye irritation - Category 2A
Skin corrosion/irritation - Category 2
Specific Target Organ Toxicity Single Exposure - Category 3
Target Organ(s): Central Nervous System

Label Elements

Hazard Symbols



Signal Word: Warning

Hazard Statements

Flammable liquid and vapour.
Causes serious eye irritation.
Causes skin irritation.
Harmful if swallowed.
May be harmful in contact with skin.
May cause drowsiness and dizziness.
May cause respiratory irritation.

2. HAZARD IDENTIFICATION

Precautionary Statements**Prevention**

Do not eat, drink or smoke when using this product.
Use only in well-ventilated areas.
Wash hands thoroughly after handling.
Avoid breathing mists, vapor or dust.
Keep away from heat, sparks and open flame. - No smoking.
Use explosion-proof equipment.
Wear protective gloves and eye/face protection.
Take precautionary measures against static discharge.

Response

If skin irritation occurs, get medical advice/attention.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists, get medical advice/attention.
If inhaled: Remove to fresh air and keep comfortable for breathing.
If on skin (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
Take off contaminated clothing and wash before re-use.
Rinse mouth.
Call a poison center or doctor/physician if you feel unwell.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Storage

Store locked up.
Store container tightly closed in well-ventilated place.

Disposal

Dispose of contents/container in accordance with local regulation.

Other Hazards

None

Specific Concentration Limits

The values listed below represent the percentages of ingredients of unknown toxicity.

Acute oral toxicity	0 - 10%
Acute dermal toxicity	0 - 10%
Acute inhalation toxicity	0 - 10%
Acute aquatic toxicity	40 – 50%

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CAS Number	Concentration
Isopropanol	67-63-0	40 – 50%
Guanidine Hydrochloride	50-01-1	40 – 50%

4. FIRST- AID MEASURES

Description of necessary first-aid measures**Eyes**

Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

Skin

Wash affected area with plenty of water. Seek medical attention if symptoms persist.

Ingestion

Do not induce vomiting. Have victim drink 1-3 glasses of water to dilute stomach contents. Never administer anything by mouth if a victim is losing consciousness, is unconscious or is convulsing. Obtain medical attention immediately.

Inhalation

Remove from exposure. If there is difficulty in breathing, give oxygen. Obtain medical attention if symptoms persist.

Most important symptoms/effects, acute and delayed

Aside from the information found under description of necessary first aid measures (above) and Indication of immediate medical attention and special treatment needed, no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed**Notes to Physicians**

Treat symptomatically.

5. FIRE - FIGHTING MEASURES

Suitable (and unsuitable) Extinguishing Media

Use foam, dry chemical or carbon dioxide. Be aware of the possibility of re-ignition. Keep containers and surroundings cool with water spray.

Specific hazards arising from the chemical

Vapors can travel a considerable distance to a source of ignition and flashback.

Special Protective Actions for Fire-Fighters

Wear full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear appropriate protective clothing.

Environmental Precautions

Prevent the material from entering drains or watercourses. Notify authorities if spill has entered watercourse or sewer or has contaminated soil or vegetation.

Methods and materials for containment and cleaning up

Contain and absorb using earth, sand or other inert material. Transfer into suitable containers for recovery or disposal. Eliminate all sources of ignition.

7. HANDLING AND STORAGE

Precautions for safe handling

Use in well ventilated area. Use local exhaust ventilation. Avoid inhaling vapor. Avoid contact with eyes, skin and clothing. Keep container tightly closed when not in use.

Conditions for safe storage

Store at room temperature. Store away from sources of heat or ignition. Storage area should be: cool - dry - well ventilated - out of direct sunlight - away from sources of ignition (heat, sparks, flames, pilot lights) - away from incompatible materials (see Section 10)

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

Isopropanol

ACGIH: 200ppm 8h TWA, 400ppm 15-min STEL

OSHA: PEL 400ppm (980mg/m³) 8h TWA

Appropriate engineering controls

No specific measures necessary.

Individual protection measures**Respiratory Protection**

Respiratory protection not normally required.

Skin Protection

Chemical resistant gloves

Eye/Face Protection

Chemical goggles or safety glasses with side shields

Body Protection

Normal work wear.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical State	Liquid
Color	Colorless
Odor	Alcoholic
Odor Threshold	No data available
pH	7 - 8
Specific Gravity	1.06
Boiling Range/Point (°C/F)	No data available
Melting Point (°C/F)	No data available
Flash Point (PMCC) (°C/F)	25°C/77°F
Vapor Pressure	No data available
Evaporation Rate (BuAc=1)	No data available
Solubility in Water	No data available
Vapor Density (Air = 1)	No data available
VOC (g/l)	No data available
Partition coefficient (n-octanol/water)	No data available
Viscosity	No data available

9. PHYSICAL AND CHEMICAL PROPERTIES

Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Upper explosive limit	No data available
Lower explosive limit	No data available
Flammability (solid, gas)	Not applicable

10. STABILITY AND REACTIVITY

Reactivity

No known reactivity.

Chemical Stability

Stable under normal conditions.

Possibility of hazardous reactions

Hazardous polymerization will not occur.

Conditions to Avoid

Heat – high temperatures

Incompatible Materials

Strong oxidizing agents

Hazardous Decomposition Products

Oxides of carbon - nitrogen oxides - hydrogen chloride gas

11. TOXICOLOGICAL INFORMATION

Acute ToxicityIsopropanol:

Oral LD50 (rat) 5045 mg/kg

Dermal LD50 (rabbit) 12,800 mg/kg

Inhalation LC50 (rat) 72.6 mg/l

Guanidine hydrochloride

Oral LD50 (rat, female) 773.6 mg/kg

Dermal LD50 (rabbit) >2000 mg/kg

Inhalation LC50: (rat- female) 3.181 mg/l , (rat- male) 7.655 mg/l, (rat- male/female) 5.319 mg/l

(ECHA Note: This substance has to be classified according to CLP, EU GHS (Regulation (EC) No. 1272/2008) for Acute toxicity (Inhalation) as Category 4 based on the female LC50, route of administration: aerosol - air)

Specific Target Organ Toxicity (STOT) – single exposure

Isopropanol: Causes adverse central nervous system effects.

Specific Target Organ Toxicity (STOT) – repeat exposure

No data available to indicate product or components will cause target organ effects after repeated exposure.

Serious Eye damage/Irritation

Isopropanol: Causes eye irritation.

Guanidine hydrochloride: Irritating in eye irritation study (rabbits)

11. TOXICOLOGICAL INFORMATION

Skin Corrosion/Irritation

Guanidine hydrochloride: Irritating in skin irritation study (rabbits)

Respiratory or Skin Sensitization

No data available to indicate product or components may cause skin or respiratory sensitization.

Carcinogenicity

No data available to indicate product may present a carcinogenic hazard.

Germ Cell Mutagenicity

No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Reproductive Toxicity

No data available to indicate either product or components present at greater than 0.1% may cause reproductive toxicity or birth defects.

Aspiration Hazard

Not an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Isopropanol

LC50 (fathead minnow) 9640 mg/l 96 hr

EC50 (daphnia magna) 13,299 mg/l 48 hr

EC50 (algae) 1000 mg/l 96 hr

Mobility in soil

No relevant studies identified.

Persistence/Degradability

No relevant studies identified.

Bioaccumulative Potential

No relevant studies identified.

Other adverse effects

No relevant studies identified.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of in accordance with all applicable local and national regulations.

14. TRANSPORT INFORMATION

Contact supplier for transport information.

15. REGULATORY INFORMATION

United States TSCA Inventory

Components of this product have not been verified for the inventory listing requirements of the US Toxic Substance Control Act (TSCA) Chemical Substance Inventory.

Canada DSL Inventory

Components of this product have not been verified for inclusion on the Domestic Substance List (DSL).

WHMIS Classification

B2.D2B

This product was classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations and the MSDS contains all the information required by these regulations.

SARA Title III Sect. 311/312 Categorization

Immediate (Acute), Fire Hazard

16. OTHER INFORMATION

NFPA Ratings

NFPA Code for Flammability - 3

NFPA Code for Health - 2

NFPA Code for Reactivity - 0

NFPA Code for Special Hazards – None

HMIS Ratings

HMIS Code for Flammability - 3

HMIS Code for Health - 2

HMIS Code for Physical Hazard - 0

HMIS Code for Personal Protection - See Section 8

*Chronic

Legend

ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstracts Service

ECHA: European Chemicals Agency

IARC: International Agency for Research on Cancer

N/A: Denotes no applicable information found or available

NTP: National Toxicology Program

OSHA: Occupational Safety and Health Administration

PEL: Permissible Exposure Limit

SDS: Safety Data Sheet

STEL: Short Term Exposure Limit

TLV: Threshold Limit Value

Information Source and References

This SDS is prepared by Hazard Communication Specialists based on information provided by internal company references.

Prepared By: EnviroNet LLC.

16. OTHER INFORMATION

The information and recommendations presented in this SDS are based on sources believed to be accurate. Covaris assumes no liability for the accuracy or completeness of this information. It is the user's responsibility to determine the suitability of the **material** for their particular purposes. In particular, we make **NO WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED**, with respect to such information, and we assume no liability resulting from its use. Users should ensure that any use **or disposal** of the material is in accordance with applicable Federal, State, and local laws and regulations.
