

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
Product name : ZipChip Oligos BGE

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture : For research and development use only.  
Restrictions on use : Not for use in diagnostic procedures.

#### 1.3. Supplier

##### Manufacturer

908 Devices  
645 Summer St  
Boston, MA, 02210  
USA  
T 1 (857) 254 - 1500  
[908devices.com](http://908devices.com)

#### 1.4. Emergency telephone number

Emergency number : 1 (844) 908 - 4357

### SECTION 2: Hazard(s) identification



#### 2.1. Classification of the substance or mixture

##### GHS US classification

Flam. Liq. 2	Highly flammable liquid and vapor
Eye Irrit. 2A	Causes serious eye irritation
STOT SE 3	May cause drowsiness or dizziness

#### 2.2. GHS Label elements, including precautionary statements

##### GHS US labeling

Hazard pictograms (GHS US)	:	 
Signal word (GHS US)	:	Danger
Hazard statements (GHS US)	:	Highly flammable liquid and vapor Causes serious eye irritation May cause drowsiness or dizziness
Precautionary statements (GHS US)	:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing dust/fume/gas/mist/vapors/spray. Wash hands, forearms and face thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection.

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Call a poison center or doctor if you feel unwell.  
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
If inhaled: Remove person to fresh air and keep comfortable for breathing.  
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.  
Keep cool.  
Store locked up.  
Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### 2.3. Other hazards which do not result in classification

Other hazards which do not result in classification : Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%
Isopropyl alcohol	CAS-No.: 67-63-0	< 21

\*Chemical name, CAS number and/or exact concentration have been withheld as a trade secret

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.  
First-aid measures after skin contact : If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash clothing before re-using. Get medical attention if irritation develops and persists.  
First-aid measures after eye contact : 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.  
First-aid measures after ingestion : Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

### 4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation : May cause drowsiness or dizziness. May cause irritation to the respiratory tract.  
Symptoms/effects after skin contact : May cause skin irritation. Repeated exposure may cause skin dryness or cracking.  
Symptoms/effects after eye contact : Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.  
Symptoms/effects after ingestion : May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.

### 4.3. Immediate medical attention and special treatment, if necessary

Symptoms may be delayed. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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### SECTION 5: Fire-fighting measures

#### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry chemical. Alcohol foam. Carbon dioxide (CO<sub>2</sub>).  
Unsuitable extinguishing media : Do not use a solid water stream as it may scatter and spread fire.

#### 5.2. Specific hazards arising from the chemical

Fire hazard : Highly flammable liquid and vapor. Products of combustion may include, and are not limited to: oxides of carbon. irritating vapors.  
Explosion hazard : May form flammable/explosive vapor-air mixture. Heavier than air, vapors may travel long distances along ground, ignite and flash back to source.

#### 5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Move containers away from the fire area if this can be done without risk. Cool closed containers exposed to fire with water spray. Prevent runoff from entering water courses, sewers and basements.  
Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Use special care to avoid static electric charges. Remove all sources of ignition.

##### 6.1.1. For non-emergency personnel

No additional information available

##### 6.1.2. For emergency responders

No additional information available

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters.

#### 6.3. Methods and material for containment and cleaning up

For containment : Stop leak if safe to do so. Remove ignition sources. Absorb and/or contain spill with inert material (sand, vermiculite or other appropriate material), then place in suitable container. Do not flush into surface water or sewer system. Wear recommended personal protective equipment.  
Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal. Provide ventilation.

#### 6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection".

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.

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Precautions for safe handling	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin, eyes and clothing. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. Take precautionary measures against static discharge. Use only non-sparking tools. Use only outdoors or in a well-ventilated area.
Hygiene measures	: Take off immediately all contaminated clothing and wash it before reuse. Wash hands, forearms and face thoroughly after handling.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Proper grounding procedures to avoid static electricity should be followed.
Storage conditions	: Keep out of the reach of children. Keep container tightly closed. Do not store in unlabelled containers. Store in dry, well-ventilated area. Keep cool. Keep out of direct sunlight. Containers which are opened should be properly resealed and kept upright to prevent leakage. Protect from physical damage. Protect from freezing. Store locked up.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

<b>ZipChip Oligos BGE</b>	
No additional information available	
<b>Isopropyl alcohol (67-63-0)</b>	
<b>USA - ACGIH - Occupational Exposure Limits</b>	
Local name	2-Propanol
ACGIH OEL TWA [ppm]	200 ppm
ACGIH OEL STEL [ppm]	400 ppm
Remark (ACGIH)	TLV® Basis: Eye & URT irr; CNS impair. Notations: A4 (Not classifiable as a Human Carcinogen); BEI
ACGIH chemical category	Not Classifiable as a Human Carcinogen
Regulatory reference	ACGIH 2023
<b>USA - ACGIH - Biological Exposure Indices</b>	
Local name	2-PROPANOL
BEI (BLV)	40 mg/l Parameter: Acetone - Medium: urine - Sampling time: end of shift at end of workweek (background, nonspecific)
Regulatory reference	ACGIH 2023
<b>USA - OSHA - Occupational Exposure Limits</b>	
Local name	Isopropyl alcohol
OSHA PEL (TWA) [1]	980 mg/m <sup>3</sup>
OSHA PEL (TWA) [2]	400 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
<b>USA - IDLH - Occupational Exposure Limits</b>	
IDLH [ppm]	2000 ppm (10% LEL)
<b>USA - NIOSH - Occupational Exposure Limits</b>	
NIOSH REL (TWA)	980 mg/m <sup>3</sup>

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Isopropyl alcohol (67-63-0)	
NIOSH REL TWA [ppm]	400 ppm
NIOSH REL (STEL)	1225 mg/m <sup>3</sup>
NIOSH REL STEL [ppm]	500 ppm

### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station. Provide readily accessible eye wash stations and safety showers.  
Environmental exposure controls : Avoid release to the environment.

### 8.3. Individual protection measures/Personal protective equipment

<b>Hand protection:</b>
Wear suitable gloves resistant to chemical penetration. Consult glove manufacturer's product information on material suitability and material thickness.
<b>Eye protection:</b>
Wear eye/face protection
<b>Skin and body protection:</b>
Chemical resistant apron. Flame retardant and anti-static material recommended
<b>Respiratory protection:</b>
In case of insufficient ventilation, wear suitable respiratory equipment. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. SDSs cannot provide detailed and complete respiratory protection guidelines. Selection of respiratory protection must be done by a qualified person who has assessed the work environment.

#### Thermal hazard protection:

Not required for normal conditions of use.

#### Other information:

Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Clear.
Color	: Colorless
Odor	: No data available
Odor threshold	: No data available
pH	: 8.6
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Highly flammable liquid and vapor.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: 0.95
Solubility	: Miscible.
Partition coefficient n-octanol/water	: No data available
Auto-ignition temperature	: No data available

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Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No dangerous reactions known under normal conditions of use. Contact with metals (aluminum) produces hydrogen gas which may form explosive mixtures with air.

### 10.2. Chemical stability

Stable under normal conditions. May form flammable/explosive vapor-air mixture.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Heat. Sparks. Open flame. Incompatible materials. Sources of ignition. Direct sunlight.

### 10.5. Incompatible materials

Strong oxidizing agents. Nitrates. Perchlorates. Sulfuric acid. Aluminum. This material may attack some forms of plastics, rubbers and coatings.

### 10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon. May release flammable gases.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Isopropyl alcohol (67-63-0)	
LD50 oral rat	5840 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	4059 mg/kg
LC50 inhalation rat	> 10000 ppm (Exposure time: 6 h)

Skin corrosion/irritation	: Not classified pH: 8.6
Serious eye damage/irritation	: Causes serious eye irritation. pH: 8.6
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

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Isopropyl alcohol (67-63-0)	
IARC group	3 - Not classifiable

Reproductive toxicity : Not classified  
STOT-single exposure : May cause drowsiness or dizziness.

Isopropyl alcohol (67-63-0)	
STOT-single exposure	May cause drowsiness or dizziness.

STOT-repeated exposure : Not classified  
Aspiration hazard : Not classified  
Viscosity, kinematic : No data available  
Symptoms/effects after inhalation : May cause drowsiness or dizziness. May cause irritation to the respiratory tract.  
Symptoms/effects after skin contact : May cause skin irritation. Repeated exposure may cause skin dryness or cracking.  
Symptoms/effects after eye contact : Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.  
Symptoms/effects after ingestion : May be harmful if swallowed. May cause gastrointestinal irritation, nausea, vomiting and diarrhea.  
Other information : Likely routes of exposure: ingestion, inhalation, skin and eye.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

Isopropyl alcohol (67-63-0)	
LC50 - Fish [1]	10000 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	13299 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 - Fish [2]	9640 mg/l Test organisms (species): Pimephales promelas
EC50 72h - Algae [1]	> 1000 mg/l (Species: Desmodesmus subspicatus)
EC50 96h - Algae [1]	> 1000 mg/l (Species: Desmodesmus subspicatus)

### 12.2. Persistence and degradability

#### ZipChip Oligos BGE

Persistence and degradability : Not established.

### 12.3. Bioaccumulative potential

#### ZipChip Oligos BGE

Bioaccumulative potential : Not established.

#### Isopropyl alcohol (67-63-0)

Partition coefficient n-octanol/water : 0.05 (at 25 °C)

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Other information : No other effects known.

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### SECTION 13: Disposal considerations

#### 13.1. Disposal methods

- Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. The generation of waste should be avoided or minimized wherever possible.
- Additional information : Handle empty containers with care because residual vapors are flammable.

### SECTION 14: Transport information

In accordance with DOT / IMDG / IATA

#### 14.1. UN number

- DOT NA No : UN1993  
UN-No. (IMDG) : UN1993  
UN-No. (IATA) : UN1993

#### 14.2. UN proper shipping name

- Proper Shipping Name (DOT) : Flammable liquids, n.o.s. (Isopropyl Alcohol)  
Proper Shipping Name (IMDG) : FLAMMABLE LIQUID, N.O.S. (ISOPROPYL ALCOHOL)  
Proper Shipping Name (IATA) : Flammable liquid, n.o.s. (Isopropyl Alcohol)

#### 14.3. Transport hazard class(es)

##### DOT

- Transport hazard class(es) (DOT) : 3  
Hazard labels (DOT) : 3



##### IMDG

- Transport hazard class(es) (IMDG) : 3  
Hazard labels (IMDG) : 3



##### IATA

- Transport hazard class(es) (IATA) : 3  
Hazard labels (IATA) : 3



#### 14.4. Packing group

- Packing group (DOT) : III  
Packing group (IMDG) : III  
Packing group (IATA) : III



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according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

### 14.5. Environmental hazards

Other information : No supplementary information available.

### 14.6. Special precautions for user

Special transport precautions : Do not handle until all safety precautions have been read and understood.

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

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

### 15.2. International regulations

No additional information available

### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

## SECTION 16: Other information

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

Issue date : 03/02/2023  
Revision date : 10/26/2023  
Other information : None.  
Prepared by : Nexreg Compliance Inc.  
[www.Nexreg.com](http://www.Nexreg.com)



### Full text of H-phrases

Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Flam. Liq. 2	Flammable liquids Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis

### Indication of changes:

Section	Changed item	Change	Comments
14	Transport information	Modified	V1.1
SDS	Product name	Modified	V1.1

Safety Data Sheet (SDS), USA

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