

### SECTION 1: Identification

#### 1.1. Identification

Product form : Mixture  
 Product name : Rebel 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 |
| Skin Irrit. 2 | Causes skin irritation            |
| 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 skin irritation  
 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, lighting, ventilating equipment.  
 Use only non-sparking tools.  
 Take precautionary measures against static discharge.  
 Avoid breathing dust, fume, gas, mist, spray, vapors.  
 Wash hands, forearms and face thoroughly after handling.

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Use only outdoors or in a well-ventilated area.  
Wear protective clothing, eye protection, face protection.  
Call a POISON CENTER, a doctor if you feel unwell.  
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
If skin irritation occurs: Get medical advice/attention.  
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.  
Store in a well-ventilated place. 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   | 20 – 50 |
| Formic acid       | CAS-No.: 64-18-6   | < 4     |

\*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 inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician 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. If skin irritation occurs: Get medical advice/attention.  
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 irritation to the respiratory tract. May cause drowsiness or dizziness.  
Symptoms/effects after skin contact : Causes skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.  
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.

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### 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).

## SECTION 5: Fire-fighting measures

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

Suitable extinguishing media : Dry chemical powder. Alcohol-resistant 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. Formaldehyde.  
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".

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### 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.   |
| Precautions for safe handling     | : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray. 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 a dry, cool and well-ventilated place. 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. |

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

|   |   |
|---|---|
| <b>Rebel 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  |

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| Isopropyl alcohol (67-63-0)                       |                        |
|---|------------------------|
| <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>  |
| NIOSH REL TWA [ppm]                               | 400 ppm                |
| NIOSH REL (STEL)                                  | 1225 mg/m <sup>3</sup> |
| NIOSH REL STEL [ppm]                              | 500 ppm                |
| <b>Formic acid (64-18-6)</b>                      |                        |
| <b>USA - ACGIH - Occupational Exposure Limits</b> |                        |
| ACGIH OEL TWA [ppm]                               | 5 ppm                  |
| ACGIH OEL STEL [ppm]                              | 10 ppm                 |
| <b>USA - OSHA - Occupational Exposure Limits</b>  |                        |
| OSHA PEL (TWA) [1]                                | 9 mg/m <sup>3</sup>    |
| OSHA PEL (TWA) [2]                                | 5 ppm                  |
| <b>USA - IDLH - Occupational Exposure Limits</b>  |                        |
| IDLH [ppm]  | 30 ppm                 |
| <b>USA - NIOSH - Occupational Exposure Limits</b> |                        |
| NIOSH REL (TWA)                                   | 9 mg/m <sup>3</sup>    |
| NIOSH REL TWA [ppm]                               | 5 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.

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### SECTION 9: Physical and chemical properties

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

|   |                                      |
|---|--------------------------------------|
| Physical state                              | : Liquid                             |
| Appearance                                  | : Clear, colorless liquid.           |
| Color                                       | : Colorless                          |
| Odor  | : Slight Alcohol-like                |
| Odor threshold                              | : No data available                  |
| pH  | : No data available                  |
| 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                            | : No data available                  |
| Solubility                                  | : Water: completely soluble          |
| Partition coefficient n-octanol/water       | : No data available                  |
| Auto-ignition temperature                   | : No data available                  |
| 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.

#### 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. Incompatible materials. Sources of ignition. Direct sunlight.

#### 10.5. Incompatible materials

Strong oxidizing agents. Aluminum. Magnesium. 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. Formaldehyde.

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### 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)  |

| Formic acid (64-18-6) |   |
|-----------------------|---|
| LD50 oral rat         | 1100 mg/kg  |
| LD50 dermal rat       | > 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity) |
| LC50 inhalation rat   | 7.85 mg/l/4h  |

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

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

| Formic acid (64-18-6)                    |  |
|--|--|
| NOAEL (chronic,oral,animal/male,2 years) | 400 mg/kg body weight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies), Remarks on results: other:Effect type: toxicity (migrated information) |

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

| Formic acid (64-18-6)                         |   |
|---|---|
| LOAEL (oral,rat,90 days)                      | 2000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) |
| NOAEL (oral,rat,90 days)                      | 400 mg/kg body weight Animal: rat, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)  |
| NOAEC (inhalation,rat,dust/mist/fume,90 days) | 0.244 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)                |

Aspiration hazard : Not classified  
Viscosity, kinematic : No data available  
Symptoms/effects after inhalation : May cause irritation to the respiratory tract. May cause drowsiness or dizziness.  
Symptoms/effects after skin contact : Causes skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.  
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.

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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)            |

| Formic acid (64-18-6) |   |
|-----------------------|---|
| LC50 - Fish [1]       | 130 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio) |
| EC50 - Crustacea [1]  | 120 mg/l (Exposure time: 48 h - Species: Daphnia magna)                           |
| EC50 - Crustacea [2]  | 138 – 165.6 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])          |
| EC50 72h - Algae [1]  | 26.9 mg/l (Species: Desmodesmus subspicatus)                                      |
| EC50 96h - Algae [1]  | 25 mg/l (Species: Desmodesmus subspicatus)  |
| LOEC (chronic)        | > 100 mg/l Test organisms (species): Daphnia magna Duration: '21 d'               |
| NOEC (chronic)        | ≥ 100 mg/l Test organisms (species): Daphnia magna Duration: '21 d'               |

#### 12.2. Persistence and degradability

| Rebel BGE                     |                        |
|-------------------------------|------------------------|
| Persistence and degradability | Readily biodegradable. |

#### 12.3. Bioaccumulative potential

| Rebel BGE                 |                             |
|---------------------------|-----------------------------|
| Bioaccumulative potential | Not expected to accumulate. |

| Isopropyl alcohol (67-63-0)           |                 |
|---------------------------------------|-----------------|
| Partition coefficient n-octanol/water | 0.05 (at 25 °C) |

| Formic acid (64-18-6)                 |                          |
|---------------------------------------|--------------------------|
| BCF - Fish [1]                        | (0.22 dimensionless)     |
| Partition coefficient n-octanol/water | -1.9 (at 23 °C (at pH 5) |

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

Other information : No other effects known.

# Rebel BGE

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

### 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 : UN1219  
UN-No. (IMDG) : UN1219  
UN-No. (IATA) : UN1219

#### 14.2. UN proper shipping name

- Proper Shipping Name (DOT) : Isopropanol Solution  
Proper Shipping Name (IMDG) : ISOPROPANOL SOLUTION  
Proper Shipping Name (IATA) : Isopropanol Solution

#### 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) : II  
Packing group (IMDG) : II  
Packing group (IATA) : II

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### 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 : 04/28/2023  
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   |
| Skin Irrit. 2 | Skin corrosion/irritation 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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