1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
Product Identity
Blast Off

Alternate Names
Blast Off

1.2. Relevant identified uses of the substance or mixture and uses advised against
Intended use
See Technical Data Sheet.

Application Method
See Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet
Company Name
Citation Equipment, INC
4319 Crittenden Drive
Louisville, KY 40209. USA

Emergency
CHEMTREC (USA) (800) 424-9300
24 hour Emergency Telephone No. 502-367-2239
Customer Service: Citation Equipment, INC 502-367-2239

2. Hazard identification of the product

2.1. Classification of the substance or mixture
Acute Tox. 4;H302 Harmful if swallowed.
Skin Corr. 1A;H314 Causes severe skin burns and eye damage.
Eye Dam. 1;H318 Causes serious eye damage.

2.2. Label elements
Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.

Danger

H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

<table>
<thead>
<tr>
<th>Ingredient/Chemical Designations</th>
<th>Weight %</th>
<th>GHS Classification</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium hydroxide.</td>
<td>10 - 25</td>
<td>Acute Tox. 4:H302</td>
<td>[1][2]</td>
</tr>
<tr>
<td>CAS Number: 0001310-58-3</td>
<td></td>
<td>Skin Corr. 1A:H314</td>
<td></td>
</tr>
<tr>
<td>Disodium metasilicate</td>
<td>1.0-10</td>
<td>Skin Corr. 1B:H314; STOT SE 3; H335</td>
<td>[1]</td>
</tr>
<tr>
<td>CAS Number: 0006834-92-0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium gluconate</td>
<td>1.0-10</td>
<td></td>
<td>[1]</td>
</tr>
<tr>
<td>CAS Number: 0000527-07-1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[1] Substance classified with a health or environmental hazard.
*The full texts of the phrases are shown in Section 16.

4. First aid measures

4.1. Description of first aid measures

General
In all cases of doubt, or when symptoms persist, seek medical attention.
Never give anything by mouth to an unconscious person.
Inhalation  Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention. Give nothing by mouth.

Eyes  Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart and seek medical attention.

Skin  Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.

Ingestion  Do NOT induce vomiting. Rinse mouth and slowly drink several glasses of water. Call a physician. Do NOT give anything by mouth to an unconscious or convulsing person.

4.2. Most important symptoms and effects, both acute and delayed

Overview  Acute (Immediate): Ingestion may cause death.
        Chronic (Delayed Effect): Avoid contact with eyes.
        Signs and Symptoms of Exposure: Burning and itching of exposed flesh.
        Medical Conditions Generally Aggravated by Exposure: Open wounds, rashes.

Routes of Entry:
        Inhalation: None
        Eyes: Avoid
        Skin: Avoid
        Ingestion: Avoid

See section 2 for further details.

Eyes  Causes serious eye damage.

Skin  Causes severe skin burns and eye damage.

Ingestion  Harmful if swallowed.

5. Fire-fighting measures

5.1. Extinguishing media
As appropriate for surrounding fire.

5.2. Special hazards arising from the substance or mixture
Hazardous decomposition: No hazardous decomposition data available.

5.3. Advice for fire-fighters
None

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Put on appropriate personal protective equipment (see section 8).

6.2. Environmental precautions
Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.
6.3. Methods and material for containment and cleaning up
Dilution with water neutralize with Acetic Acid and flushed to sewer with a large amount of water.

7. Handling and storage

7.1. Precautions for safe handling
See section 2 for further details. - [Prevention]:

7.2. Conditions for safe storage, including any incompatibilities
Containers should be stored in a cool, dry, well-ventilated area. Exercise due caution to prevent damage to or leakage from the container. Keep containers closed when not in use.
Incompatible materials: Incompatible with strong oxidizers, leather and halogenated compounds. Product will react with 'soft' metals such as aluminum, tin, magnesium, and zinc releasing flammable hydrogen gas.
See section 2 for further details. - [Storage]:

7.3. Specific end use(s)
No data available.

8. Exposure controls and personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Ingredient</th>
<th>Source</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000527-07-1</td>
<td>Sodium gluconate</td>
<td>OSHA</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NIOSH</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supplier</td>
<td>No Established Limit</td>
</tr>
<tr>
<td>0001310-58-3</td>
<td>Potassium hydroxide.</td>
<td>OSHA</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH</td>
<td>Ceiling: 2 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NIOSH</td>
<td>C 2 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supplier</td>
<td>No Established Limit</td>
</tr>
<tr>
<td>0006834-92-0</td>
<td>Disodium metasilicate</td>
<td>OSHA</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NIOSH</td>
<td>No Established Limit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supplier</td>
<td>ACHAN TLV/OSHA 2mg/m³/PEL 2mg/m³</td>
</tr>
</tbody>
</table>

Carcinogen Data

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Ingredient</th>
<th>Source</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0000527-07-1</td>
<td>Sodium gluconate</td>
<td>OSHA</td>
<td>Select Carcinogen: No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NTP</td>
<td>Known: No; Suspected: No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IARC</td>
<td>Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;</td>
</tr>
</tbody>
</table>
8.2. Exposure controls

Respiratory  NIOSH approved self contained positive pressure apparatus.
Eyes  Protective safety glasses recommended.
Skin  Protective rubber gloves. Rubber apron or suit.
Engineering Controls  Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

Other Work Practices  Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>No odor</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not Measured</td>
</tr>
<tr>
<td>pH</td>
<td>Not Measured</td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>N/A</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>120 C</td>
</tr>
<tr>
<td>Flash Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Evaporation rate (Ether = 1)</td>
<td>Not Measured</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>Lower Explosive Limit: N/A</td>
</tr>
<tr>
<td></td>
<td>Upper Explosive Limit: N/A</td>
</tr>
<tr>
<td>Vapor pressure (Pa)</td>
<td>N/A</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>N/A</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.3 (H2O = 1)</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>100%</td>
</tr>
<tr>
<td>Partition coefficient n-octanol/water (Log Kow)</td>
<td>Not Measured</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not Measured</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not Measured</td>
</tr>
</tbody>
</table>
9.2. Other information
No other relevant information.

10. Stability and reactivity

10.1. Reactivity
Hazardous Polymerization will not occur.

10.2. Chemical stability
Stable under normal circumstances.

10.3. Possibility of hazardous reactions
Incompatible with strong oxidizers, leather and halogenated compounds. Product will react with 'soft' metals such as aluminum, tin, magnesium, and zinc releasing flammable hydrogen gas.

10.4. Conditions to avoid
Excessive heat and open flame.
Sealed containers may develop explosive pressures under fire conditions. Use water to cool containers exposed to fire.

10.5. Incompatible materials
Incompatible with strong oxidizers, leather and halogenated compounds. Product will react with 'soft' metals such as aluminum, tin, magnesium, and zinc releasing flammable hydrogen gas.

10.6. Hazardous decomposition products
Potassium oxides

11. Toxicological information

Acute toxicity

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Oral LD50, mg/kg</th>
<th>Skin LD50, mg/kg</th>
<th>Inhalation Vapor LD50, mg/L/4hr</th>
<th>Inhalation Dust/Mist LD50, mg/L/4hr</th>
<th>Inhalation Gas LD50, ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium hydroxide - (1310-58-3)</td>
<td>365.00, Rat - Category: 4</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Disodium metasilicate - (6834-92-0)</td>
<td>1,153.00, Rat - Category: 4</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Sodium gluconate - (527-07-1)</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
</tbody>
</table>

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).
12. Ecological information

12.1. Toxicity
No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>96 hr LC50 fish, mg/l</th>
<th>48 hr EC50 crustacea, mg/l</th>
<th>ErC50 algae, mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium hydroxide. - (1310-58-3)</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>Disodium metasilicate - (6834-92-0)</td>
<td>210.00, Danio rerio</td>
<td>33.53, Ceriodaphnia dubia</td>
<td>400.00 (72 hr), Pseudokirchneriella subcapitata</td>
</tr>
<tr>
<td>Sodium gluconate - (527-07-1)</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability
There is no data available on the preparation itself.

12.3. Bioaccumulative potential
Not Measured

12.4. Mobility in soil
No data available.

12.5. Results of PBT and vPvB assessment
This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects
No data available.
13. Disposal considerations

13.1. Waste treatment methods
Observe all federal, state and local regulations when disposing of this substance.

14. Transport information

14.1. UN number
DOT (Domestic Surface Transportation) Not Applicable
IMO / IMDG (Ocean Transportation) Not Regulated
ICAO/IATA Not Regulated

14.2. UN proper shipping name
Not Regulated
Not Regulated
Not Regulated

14.3. Transport hazard class(es)
DOT Hazard Class: Not Applicable
IMDG: Not Applicable
Sub Class: Not Applicable
Air Class: Not Applicable

14.4. Packing group
DOT Label: ---
Not Applicable
Not Applicable
Not Applicable

14.5. Environmental hazards
IMDG Marine Pollutant: No
Not Applicable
Not Applicable

14.6. Special precautions for user
No further information

15. Regulatory information

Regulatory Overview
The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

Toxic Substance Control Act (TSCA)
All components of this material are either listed or exempt from listing on the TSCA Inventory.

WHMIS Classification
D2B E

US EPA Tier II Hazards
Fire: No
Sudden Release of Pressure: No
Reactive: No
Immediate (Acute): Yes
Delayed (Chronic): No

EPCRA 311/312 Chemicals and RQs (lbs):
Potassium hydroxide. (1,000.00)

EPCRA 302 Extremely Hazardous:
(No Product Ingredients Listed)

EPCRA 313 Toxic Chemicals:
(No Product Ingredients Listed)
Proposition 65 - Carcinogens (>0.0%):  
(No Product Ingredients Listed)

Proposition 65 - Developmental Toxins (>0.0%):  
(No Product Ingredients Listed)

Proposition 65 - Female Repro Toxins (>0.0%):  
(No Product Ingredients Listed)

Proposition 65 - Male Repro Toxins (>0.0%):  
(No Product Ingredients Listed)

N.J. RTK Substances (>1%):  
Potassium hydroxide.

Penn RTK Substances (>1%):  
Potassium hydroxide.

16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.

This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

End of Document