SAFETY DATA SHEET

1. Identification of the Substance/Mixture and of the Company/Undertaking

Product Name: Carbon Off

Company Name: Randall Industries, LLC
4565 Hemlock Road
Cherry Tree, PA 15724

Phone: 814-743-6630
Emergency 24 hour: 1-800-535-5053

Proper Shipping Name: Not Regulated
Identification No: Not Applicable
Hazard Class: Not Applicable
Generic Description: Aircraft Wash

2. Hazards Identification

Emergency Overview

Appearance liquid
Color Light green
Odor slight

GHS Classification

Not a hazardous substance or mixture.

GHS Label element

Not a hazardous substance or mixture.

Potential Health Effects

Carcinogenicity:

IARC
No component 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 component 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 component 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 component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
3 Composition / Information on Ingredients

<table>
<thead>
<tr>
<th>Ingredient(s)</th>
<th>CAS No</th>
<th>Concentration [%]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Metasilicate</td>
<td>6834-92-0</td>
<td>1.0 - 5.0</td>
</tr>
<tr>
<td>Proprietary Surfactant Blend</td>
<td>N/A</td>
<td>1.0 - 5.0</td>
</tr>
<tr>
<td>2-Butoxyethanol</td>
<td>111-76-2</td>
<td>1.0 - 5.0</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>&gt;70.0</td>
</tr>
<tr>
<td>Coloring agent and fragrance</td>
<td>N/A</td>
<td>&lt; 0.1</td>
</tr>
<tr>
<td>Sodium Hydroxide</td>
<td>1310-73-2</td>
<td>&lt; 1.0</td>
</tr>
</tbody>
</table>

*Exact percentages and other chemical information in some cases are deemed to be a Trade Secret.*

4 First Aid Measures

**General advice:** Do not leave the victim unattended.

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

In case of skin contact: Take off contaminated clothing and shoes immediately. Get medical attention if irritation develops and persists. Wash contaminated clothing before re-use. Wash off immediately with plenty of water for at least 15 minutes.

In case of eye contact: Remove contact lenses. Protect unharmed eye. If eye irritation persists, consult a specialist. If in eyes, rinse with water for 15 minutes.

If swallowed: Keep respiratory tract clear. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

5 Firefighting Measures

**Suitable extinguishing media:**
- Dry chemical
- Water spray jet
- Carbon dioxide (CO2)
- Alcohol resistant foam

**Unsuitable extinguishing media:**
- High volume water jet

**Specific hazards during firefighting:** Do not allow run-off fire fighting to enter drain water courses.

**Hazardous combustion products:**
- Carbon dioxide (CO2)
- Carbon monoxide
- Smoke

**Specific extinguishing methods:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
6 Accidental Release Measures

Personal precautions, protective equipment and emergency procedures:
- Use personal protective equipment.
- Ensure adequate ventilation.
- Refer to protective measures listed in sections 7 and 8.

Environmental precautions:
- Prevent further leakage or spillage if safe to do so.
- Prevent product from entering drains.
- If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up:
- Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
- Sweep up or vacuum up spillage and collect in suitable container for disposal.

7 Handling and Storage

Advice on safe handling:
- For personal protection see section 8.
- Smoking, eating and drinking should be prohibited in the application area.
- Avoid contact with skin and eyes.
- Avoid exposure - obtain special instructions before use.

Conditions for safe storage:
- Keep container tightly closed in a dry and well-ventilated place.
- Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid:
- Keep away from oxidizing agents and strongly acid or alkaline materials.

8 Exposure Control and Personal Protection

OCCUPATIONAL EXPOSURE LIMITS

<table>
<thead>
<tr>
<th>Chemical identity</th>
<th>Type</th>
<th>Exposure Limit values</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-BUTOXYETHANOL</td>
<td>TWA</td>
<td>20 ppm</td>
<td>US. ACGIH Threshold Limit Values (2011)</td>
</tr>
<tr>
<td></td>
<td>REL</td>
<td>5 ppm 24 mg/m3</td>
<td>US. NIOSH: Pocket Guide to Chemical Hazards (2010)</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>25 ppm 120 mg/m3</td>
<td>US. OSHA Table Z-1-A (29 CFR 1910.1000)(1989)</td>
</tr>
<tr>
<td></td>
<td>PEL</td>
<td>50 ppm 240 mg/m3</td>
<td>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)</td>
</tr>
</tbody>
</table>
### Biological limit values

<table>
<thead>
<tr>
<th>Chemical identity</th>
<th>Exposure Limit values</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-BUTOXYETHANOL (Butoxyacetic acid (BAA), with hydrolysis: Sampling time: End of shift.)</td>
<td>200 mg/g (Creatinine in urine)</td>
<td>ACGIH BEL (03 2013)</td>
</tr>
</tbody>
</table>

### Chemical identity

<table>
<thead>
<tr>
<th>Type</th>
<th>Exposure Limit values</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Hydroxide</td>
<td>TWA 2 mg/m³</td>
<td>US. OSHA Table Z-1-A (29 CFR 1910.1000)(1989)</td>
</tr>
<tr>
<td></td>
<td>PEL 2 mg/m³</td>
<td>US. ACGIH Threshold Limit Values (2011)</td>
</tr>
</tbody>
</table>

### Personal protective equipment

**Respiratory protection**

In the case of vapor formation use a respirator with an approved filter.

**Hand protection**

Remarks: The suitability for a specific workplace should be discussed with the producers of the protective gloves.

**Eye protection**

Safety glasses

Ensure that eyewash stations and safety showers are close to the workstation location.

**Skin and body protection**

Impervious clothing

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

**Hygiene measures**

When using do not eat, drink or smoke.

When using do not smoke.

Wash hands before breaks and at the end of workday.

### 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>Color</td>
<td>Light green</td>
</tr>
<tr>
<td>Odor</td>
<td>slight</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>11.5</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>100 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>does not flash</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>not determined</td>
</tr>
<tr>
<td>Relative vapour density</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>1.01 g/cm³</td>
</tr>
</tbody>
</table>
10 Stability and Reactivity

Reactivity: Stable.
Chemical Stability: Stable under normal conditions.
Possibility of Hazardous Reactions: No decomposition if stored and applied as directed.
Conditions to Avoid: No data available
Incompatible Materials: Oxidizing agents
Hazardous Decomposition Products: Carbon oxides.

11 Toxicological Information

Acute toxicity
Product: Acute oral toxicity
Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Respiratory or skin sensitisation
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
No data available

Reproductive toxicity
No data available

12 Ecological Information

Ecotoxicity
No data available

Persistence and degradability
No data available

Bioaccumulative potential

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

Mobility in soil
No data available
13 Disposal Information

**Disposal methods**

**Waste from residues**
- Dispose of in accordance with local regulations.
- Do not contaminate ponds, waterways or ditches with chemical or used container.
- Do not dispose of waste into sewer.

**Contaminated packaging**
- Empty containers should be taken to an approved waste handling site for recycling or disposal.
- Dispose of as unused product.
- Do not re-use empty containers.

14 Transport Information

**Transportation Regulation: 49 CFR (USA):**
NOT REGULATED AS DANGEROUS GOODS OF HAZARDOUS MATERIAL

**Transportation Regulation: IMDG (Vessel):**
NOT REGULATED AS DANGEROUS GOODS OR HAZARDOUS MATERIAL

**Transportation Regulation: IATA (Cargo Air):**
NOT REGULATED AS DANGEROUS GOODS OR HAZARDOUS MATERIAL

**Transportation Regulation: IATA (Passenger Air):**
NOT REGULATED AS DANGEROUS GOODS OR HAZARDOUS MATERIAL

**Transportation Regulation: TDG (Canada):**
NOT REGULATED AS DANGEROUS GOODS OR HAZARDOUS MATERIAL
15 Regulatory Information

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Component RQ (lbs)</th>
<th>Calculated product RQ (lbs)</th>
</tr>
</thead>
</table>

SARA 304 Extremely Hazardous Substances Reportable Quantity

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

SARA 311/312 Hazards  No SARA Hazards

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.

California Prop 65  This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

<table>
<thead>
<tr>
<th>Inventory Acronym</th>
<th>Validity</th>
<th>Further information</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>On TSCA Inventory</td>
<td></td>
</tr>
<tr>
<td>DSL</td>
<td>This Product contains one or several components that are not on the Canadian DSL nor NDSL.</td>
<td></td>
</tr>
</tbody>
</table>

Inventory Acronym and Validity Area Legend:

DSL ( Canada ), TSCA ( USA )

16 Other Information

Further information

<table>
<thead>
<tr>
<th>HMIS III:</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEALTH</td>
</tr>
<tr>
<td>FLAMMABILITY</td>
</tr>
<tr>
<td>PHYSICAL HAZARD</td>
</tr>
</tbody>
</table>

0 = not significant, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme, * = Chronic

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