SAFETY DATA SHEET

1. Identification

Product identifier        Brilliant® Metal Polish
Other means of identification
Product code              MK88
Recommended use           Metal polish and cleaner
Recommended restrictions  None known.

Manufacturer/Importer/Supplier/Distributor information
Manufactured or sold by:

Company name        CRC Industries, Inc.
Address             885 Louis Dr.
                     Warminster, PA 18974 US

Telephone                  
General Information  215-674-4300
Technical Assistance     800-521-3168
Customer Service        800-272-4620
24-Hour Emergency (CHEMTREC)  800-424-9300 (US)
                        703-527-3887 (International)
Website                   www.crcindustries.com

2. Hazard(s) identification

Physical hazards  Not classified.
Health hazards    Acute toxicity, oral            Category 4
                    Skin corrosion/irritation         Category 2
                    Serious eye damage/eye irritation  Category 2A
                    Specific target organ toxicity, single exposure Category 3 respiratory tract irritation

Environmental hazards
                    Hazardous to the aquatic environment, acute hazard  Category 3
                    Hazardous to the aquatic environment, long-term hazard  Category 3

OSHA defined hazards  Not classified.

Label elements

Signal word         Warning
Hazard statement    Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. Harmful to aquatic life. Harmful to aquatic life with long lasting effects.
Precautionary statement
Prevention
Use with adequate ventilation. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area. Avoid breathing mist or vapor. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves and eye/face protection. Avoid release to the environment.
Response
If swallowed: Call a poison center/doctor if you feel unwell. Rinse mouth. If on skin: Wash with plenty of water. If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. 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 attention.
Storage
Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal
Dispose of contents/container in accordance with local/regional/national regulations.

Hazard(s) not otherwise classified (HNOC)
None known.

Supplemental information
3% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 3% of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Mixtures</th>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ethanol</td>
<td></td>
<td>64-17-5</td>
<td>3 - 5</td>
</tr>
<tr>
<td></td>
<td>Oxalic acid dihydrate</td>
<td></td>
<td>6153-56-6</td>
<td>3 - 5</td>
</tr>
<tr>
<td></td>
<td>Ammonia</td>
<td></td>
<td>7664-41-7</td>
<td>&lt; 1</td>
</tr>
</tbody>
</table>

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation
If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. If breathing stops, provide artificial respiration. Call a physician if symptoms develop or persist.

Skin contact
Remove contaminated clothing. Wash off with soap and plenty of water. Call a POISON CENTER or doctor/physician if you feel unwell. Wash contaminated clothing before reuse.

Eye contact
Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Get medical attention if irritation develops and persists.

Ingestion
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth.

Most important symptoms/effects, acute and delayed
Causes serious eye irritation. Skin irritation. May cause respiratory irritation.

Indication of immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically.

General information
IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media
Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical
During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire-fighting equipment/instructions
Cool containers exposed to heat with water spray and remove container, if no risk is involved.

General fire hazards
No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up
This product is miscible in water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions

Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

7. Handling and storage

Precautions for safe handling

Provide adequate ventilation. Avoid breathing vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not taste or swallow. When using, do not eat, drink or smoke. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices. Avoid release to the environment. Use care in handling/storage. For product usage instructions, please see the product label.

Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Do not mix, use or store near bleach. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonia (CAS 7664-41-7)</td>
<td>PEL</td>
<td>35 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>50 ppm</td>
</tr>
<tr>
<td>Ethanol (CAS 64-17-5)</td>
<td>PEL</td>
<td>1900 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000 ppm</td>
</tr>
<tr>
<td>Oxalic acid dihydrate (CAS 6153-56-6)</td>
<td>PEL</td>
<td>1 mg/m³</td>
</tr>
</tbody>
</table>

US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonia (CAS 7664-41-7)</td>
<td>STEL</td>
<td>35 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>25 ppm</td>
</tr>
<tr>
<td>Ethanol (CAS 64-17-5)</td>
<td>STEL</td>
<td>1000 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td>Oxalic acid dihydrate (CAS 6153-56-6)</td>
<td>STEL</td>
<td>1 mg/m³</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>1 mg/m³</td>
</tr>
</tbody>
</table>

US. NIOSH: Pocket Guide to Chemical Hazards

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonia (CAS 7664-41-7)</td>
<td>STEL</td>
<td>27 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>35 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>18 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>25 ppm</td>
</tr>
<tr>
<td>Ethanol (CAS 64-17-5)</td>
<td>TWA</td>
<td>1900 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000 ppm</td>
</tr>
<tr>
<td>Oxalic acid dihydrate (CAS 6153-56-6)</td>
<td>STEL</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td></td>
<td>TWA</td>
<td>1 mg/m³</td>
</tr>
</tbody>
</table>

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin protection

Wear protective gloves such as: Neoprene. Nitrile. Rubber.

Hand protection

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Other

Respiratory protection

If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations
Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

**Appearance**
- **Physical state**: Liquid.
- **Form**: Liquid.
- **Color**: Opaque white.
- **Odor**: Ammoniacal.
- **Odor threshold**: Not available.
- **pH**: 9.2 - 10.4
- **Melting point/freezing point**: -173.4 °F (-114.1 °C) estimated
- **Initial boiling point and boiling range**: 147 °F (63.9 °C)
- **Flash point**: None (Tag Closed Cup)
- **Evaporation rate**: Slow.
- **Flammability (solid, gas)**: Not available.

**Upper/lower flammability or explosive limits**
- **Flammability limit - lower (%):** Not available.
- **Flammability limit - upper (%):** Not available.

**Vapor pressure**: 37.8 hPa estimated
**Vapor density**: Not available.
**Relative density**: 1.12 - 1.2
**Solubility (water)**: Dispersible.
**Partition coefficient (n-octanol/water)**: Not available.
**Auto-ignition temperature**: 685 °F (362.8 °C) estimated
**Decomposition temperature**: Not available.
**Viscosity (kinematic)**: Not available.
**Percent volatile**: 3 % estimated

**Other information**
- **Dynamic viscosity**: 2000 - 4000 cP (75 °F (23.89 °C))

10. Stability and reactivity

**Reactivity**: The product is stable and non-reactive under normal conditions of use, storage and transport.
**Chemical stability**: Material is stable under normal conditions.
**Possibility of hazardous reactions**: No dangerous reaction known under conditions of normal use.
**Conditions to avoid**: Heat, flames and sparks. Contact with incompatible materials. Do not mix, use or store near bleach.
**Incompatible materials**: Bleach.
**Hazardous decomposition products**: No hazardous decomposition products are known.

11. Toxicological information

**Information on likely routes of exposure**
- **Inhalation**: May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
- **Skin contact**: Causes skin irritation.
- **Eye contact**: Causes serious eye irritation.
- **Ingestion**: Harmful if swallowed.
Symptoms related to the physical, chemical and toxicological characteristics

Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity
Harmful if swallowed. May cause respiratory irritation.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brilliant® Metal Polish</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>Rabbit</td>
<td>667 g/kg estimated</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Rat</td>
<td>2815 mg/l, 2 Hours estimated</td>
</tr>
<tr>
<td>Oral</td>
<td>Rat</td>
<td>79662 mg/kg estimated</td>
</tr>
</tbody>
</table>

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation
Causes skin irritation.

Serious eye damage/eye irritation
Causes serious eye irritation.

Respiratory sensitization
Not a respiratory sensitizer.

Skin sensitization
This product is not expected to cause skin sensitization.

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

Carcinogenicity
This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Reproductive toxicity
This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure
May cause respiratory irritation.

Specific target organ toxicity - repeated exposure
Not classified.

Aspiration hazard
Not an aspiration hazard.

Chronic effects
Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity
Harmful to aquatic life with long lasting effects.

<table>
<thead>
<tr>
<th>Product</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brilliant® Metal Polish</td>
<td>Aquatic Fish</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LC50</td>
<td>8494.8721 mg/l, 96 hours estimated</td>
</tr>
<tr>
<td></td>
<td>Acute Crustacea</td>
<td>315 mg/l, 48 hours estimated</td>
</tr>
<tr>
<td>Components</td>
<td>Aquatic Fish</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LC50</td>
<td>Chinook salmon (Oncorhynchus tshawytscha) 0.43 - 0.47 mg/l, 96 hours</td>
</tr>
<tr>
<td>Ammonia (CAS 7664-41-7)</td>
<td>Aquatic Fish</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LC50</td>
<td>1450 mg/l</td>
</tr>
<tr>
<td>Ethanol (CAS 64-17-5)</td>
<td>Aquatic Algae</td>
<td>11.2 mg/l, 48 hours</td>
</tr>
<tr>
<td></td>
<td>EC50</td>
<td>7.7 - 11.2 mg/l, 48 hours</td>
</tr>
<tr>
<td></td>
<td>Crustacea</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EC50</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fish</td>
<td>15300 mg/l, 96 hours</td>
</tr>
</tbody>
</table>

Material name: Brilliant® Metal Polish
MK88 Version #: 01 Issue date: 05-28-2015 SDS US
5 / 8
<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oxalic acid dihydrate (CAS 6153-56-6)</td>
<td>Rainbow trout, donaldson trout (Oncorhynchus mykiss)</td>
<td>&gt; 100 mg/l, 96 hours&lt;br/&gt;&gt; 100 mg/l, 96 hours&lt;br/&gt;13000 - 15300 mg/l, 96 hours</td>
</tr>
</tbody>
</table>

Aquatic<br/>Crustacea<br/>EC50<br/>Water flea (Daphnia magna) | 125 - 150 mg/l, 48 hours |

* Estimates for product may be based on additional component data not shown.

**Persistence and degradability**<br/>No data is available on the degradability of this product.

**Bioaccumulative potential**

| Partition coefficient n-octanol / water (log Kow) | Ethanol | -0.31 |

| Mobility in soil | No data available. |

**Other adverse effects**<br/>No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

**13. Disposal considerations**

| Disposal of waste from residues / unused products | This product is not a RCRA hazardous waste (See 40 CFR Part 261.20 – 261.33). Empty containers may be recycled. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose in accordance with all applicable regulations. |

| Hazardous waste code | Not regulated. |

| Contaminated packaging | Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. |

**14. Transport information**

| DOT | Not regulated as dangerous goods. |

| IATA | Not regulated as dangerous goods. |

| IMDG | Not regulated as dangerous goods. |

**15. Regulatory information**

| US federal regulations | This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. |

| TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) | Oxalic acid dihydrate (CAS 6153-56-6) 1.0 % One-Time Export Notification only. |


| SARA 304 Emergency release notification | Not regulated. |

| US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance | Not listed. |

| CERCLA Hazardous Substance List (40 CFR 302.4) | Not listed. |

| CERCLA Hazardous Substances: Reportable quantity | Not listed. |

| Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee. |

| Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List | Not regulated. |
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA)

Not regulated.

Food and Drug Administration (FDA)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312

Hazard categories

Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance

No

US state regulations

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Ammonia (CAS 7664-41-7)

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. New Jersey Worker and Community Right-to-Know Act

Ethanol (CAS 64-17-5)
Oxalic acid dihydrate (CAS 6153-56-6)

US. Massachusetts RTK - Substance List

Ethanol (CAS 64-17-5)
Oxalic acid dihydrate (CAS 6153-56-6)

US. Pennsylvania Worker and Community Right-to-Know Law

Ammonia (CAS 7664-41-7)
Ethanol (CAS 64-17-5)
Oxalic acid dihydrate (CAS 6153-56-6)

US. Rhode Island RTK

None.

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

Volatile organic compounds (VOC) regulations

EPA

VOC content (40 CFR 51.100(s))
Not determined

Consumer products (40 CFR 59, Subpt. C)
Not regulated

State

Consumer products
This product is regulated as a Metal Polish or Cleanser (non-aerosol). This product is compliant for use in all 50 states.

VOC content (CA) 0 %
VOC content (OTC) 0 %

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>Yes</td>
</tr>
<tr>
<td>Country(s) or region</td>
<td>Inventory name</td>
<td>On inventory (yes/no)*</td>
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<tr>
<td>------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>Yes</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>Yes</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A “Yes” indicates that all components of this product comply with the inventory requirements administered by the governing country(s).

A “No” indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

<table>
<thead>
<tr>
<th>Issue date</th>
<th>05-28-2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepared by</td>
<td>Allison Cho</td>
</tr>
<tr>
<td>Version #</td>
<td>01</td>
</tr>
<tr>
<td>Further information</td>
<td>Not available.</td>
</tr>
<tr>
<td>HMIS® ratings</td>
<td>Health: 1</td>
</tr>
<tr>
<td></td>
<td>Flammability: 1</td>
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<tr>
<td></td>
<td>Physical hazard: 0</td>
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<td></td>
<td>Personal protection: B</td>
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<tr>
<td></td>
<td>Flammability: 1</td>
</tr>
<tr>
<td></td>
<td>Instability: 0</td>
</tr>
</tbody>
</table>

Disclaimer

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries’ knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries.