1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: BOLT OFF PLUS AEROSOL
Product Code: 5622
Recommended use: Lubricant
Chemical nature: Petroleum distillates and Solvent mixture

Information on Manufacturer
CERTIFIED LABS, DIV. OF NCH CORP.
BOX 152170
IRVING, TEXAS 75015

2. HAZARDS IDENTIFICATION

Emergency Overview
DANGER
Harmful if inhaled
Causes skin irritation
May cause allergic skin reaction
Severe eye irritation
May be harmful if absorbed through skin
Harmful or fatal if swallowed
Contents under pressure

Color: Yellow - Amber
Physical State: Aerosol
Odor: Ether-like

Potential Health Effects
Principle Route of Exposure
Skin contact, Eye contact, Inhalation.

Primary Routes of Entry
Inhalation, Skin Absorption.

Acute Effects
Eyes
Severe eye irritant. May cause irreversible eye damage.

Skin
Causes skin irritation. May be absorbed through the skin in harmful amounts. Also very toxic in contact with skin. May cause allergic skin reaction.

Inhalation
Harmful by inhalation. Inhalation may cause central nervous system effects. May cause central nervous system depression. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Irregular cardiac activity. Inhalation of vapors in high concentration can cause narcotic effects and metabolic acidosis. May be fatal if inhaled in large quantities.

Ingestion
Harmful or fatal if swallowed. Causes headache, drowsiness or other effects to the central nervous system. Aspiration hazard if swallowed - can enter lungs and cause damage.

Chronic Toxicity
May cause sensitization by skin contact. Risk of serious damage to the lungs (by inhalation). Liver injury may occur. Repeated absorption may cause disorder of central nervous system, liver, kidneys and blood.

Target Organ Effects
Central nervous system, Cardiovascular system, Respiratory system, Liver, Lungs, Skin, Eyes, Blood, Heart, Kidney, Bone Marrow.

Aggravated Medical Conditions
Neurological disorders, Respiratory disorders, Cardiovascular, Liver disorders, Skin disorders, Blood disorders, Kidney disorders, Heart disease.

Potential Environmental Effects
See Section 12 for additional Ecological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene chloride</td>
<td>75-09-2</td>
</tr>
<tr>
<td>Petroleum distillates, hydrotreated heavy naphthenic (&lt;3% DMSO extractable)</td>
<td>84742-32-5</td>
</tr>
<tr>
<td>Carbon Dioxide</td>
<td>124-38-9</td>
</tr>
<tr>
<td>Ethyl acetate</td>
<td>141-78-6</td>
</tr>
<tr>
<td>Sodium sulfonate</td>
<td>68808-26-4</td>
</tr>
<tr>
<td>Propylene oxide</td>
<td>75-56-9</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

General Advice
Avoid breathing vapors, mist, or gas. Avoid contact with skin, eyes and clothing.

Eye Contact
Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately.

Skin Contact
Wash off immediately with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash contaminated clothing before re-use.

Inhalation
Move to fresh air. In case of shortness of breath, give oxygen. If breathing has stopped, apply artificial respiration. Get medical attention immediately.

Ingestion
Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person.

Notes to physician
Aspiration hazard if swallowed - can enter lungs and cause damage. May cause cardiac arrhythmia. Acidosis.

5. FIRE-FIGHTING MEASURES

Flash Point
> 201 °F / > 94 °C

Method
Seta closed cup
**Autoignition Temperature**
No information available.

**Flammability Limits in Air (%)**
Upper 23  
Lower 0.8

**Suitable Extinguishing Media**
Water spray. Carbon dioxide (CO2). Dry chemical. Foam. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Specific hazards arising from the chemical**
Solvent vapors are heavier than air and may spread along floors. Vapors may ignite and explode. Material can create slippery conditions. Flame extension: 0 inches / 0 cm and Burnback: 0 inches / 0 cm.

**Protective Equipment and Precautions for Firefighters**
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**Aerosol Level (NFPA 308)**
- NFPA Health 2  
- Flammability 1  
- Instability 0

**HMIS Health 2  
- Flammability 1  
- Instability 0**

### 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions**
Use personal protective equipment. Ensure adequate ventilation. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.

**Environmental Precautions**
Prevent product from contaminating soil or from entering sewage, drainage systems, and bodies of water. Do not flush into surface water or sanitary sewer system.

**Methods for Containment**
Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

**Methods for Cleaning Up**
Pick up and transfer to properly labeled containers.

**Neutralizing Agent**
Not applicable.

### 7. HANDLING AND STORAGE

**Handling**
Wear personal protective equipment. Ensure adequate ventilation. Avoid breathing vapors, mist or gas. Avoid contact with skin, eyes and clothing.

**Storage**
Keep container tightly closed in a dry and well-ventilated place.

**Storage Temperature**
- Minimum: 35 °F / 2 °C  
- Maximum: 120 °F / 49 °C

**Storage Conditions**
- Indoor  
- Outdoor  
- Heated  
- Refrigerated

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Exposure Guidelines**

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene chloride</td>
<td>TWA: 50 ppm</td>
<td>TWA: 25 ppm</td>
<td>IDLH: 2300 ppm</td>
</tr>
<tr>
<td>Petroleum distillates, hydrotreated heavy naphthenic (&lt;3% DMSO extractable)</td>
<td>TWA: 5 mg/m³; STEL: 10 mg/m³</td>
<td>TWA: 5 mg/m³</td>
<td>IDLH: 2,500 mg/m³; STEL 10 mg/m³; TWA: 5 mg/m³</td>
</tr>
<tr>
<td>Carbon Dioxide</td>
<td>TWA: 5000 ppm; STEL: 30000 ppm</td>
<td>TWA: 5000 ppm TWA: 9000 mg/m³</td>
<td>IDLH: 40000 ppm</td>
</tr>
<tr>
<td>Ethyl acetate</td>
<td>TWA: 400 ppm</td>
<td>TWA: 400 ppm TWA: 1400 mg/m³</td>
<td>IDLH: 2000 ppm</td>
</tr>
<tr>
<td>Sodium sulfonate</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Propylene oxide</td>
<td>TWA: 2 ppm</td>
<td>TWA: 100 ppm TWA: 240 mg/m³</td>
<td>TLCH: 400 ppm</td>
</tr>
</tbody>
</table>

**Engineering Measures**
Use with local exhaust ventilation. Ensure adequate ventilation, especially in confined areas.

**Personal Protective Equipment**
- **Eye/Face Protection**
  - Tightly fitting safety goggles.
- **Skin Protection**
  - Wear suitable protective clothing. Impervious gloves.
- **Respiratory Protection**
  - In case of inadequate ventilation wear respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

**General Hygiene Considerations**
- Wear protective gloves/clothing. Ensure that eyewash stations and safety showers are close to the workstation location. Remove and wash contaminated clothing before re-use.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Aerosol</th>
<th>Viscosity</th>
<th>Non viscous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Yellow - Amber</td>
<td>Odor</td>
<td>Ether-like</td>
</tr>
<tr>
<td>Appearance</td>
<td>Transparent</td>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.88</td>
<td>Evaporation Rate</td>
<td>131.7 (Butyl acetate=1)</td>
</tr>
<tr>
<td>Percent Volatile (Volume)</td>
<td>91.6</td>
<td>VOC Content (%)</td>
<td>6.8</td>
</tr>
<tr>
<td>VOC Content (g/L)</td>
<td>59</td>
<td>Vapor Pressure</td>
<td>4925 mmHg @ 70°F</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>1.6 (Air = 1.0)</td>
<td>Solubility</td>
<td>Negligible</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>107 °F / 42 °C</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 10. STABILITY AND REACTIVITY

**Chemical Stability**
Stable. Hazardous polymerization does not occur.

**Conditions to Avoid**
Heat, flames, and sparks

**Incompatible Products**
Strong oxidizing agents, Strong acids, Strong bases, Amines.
11. TOXICOLOGICAL INFORMATION

Product Information

No information available.

Component Information

Acute Toxicity

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhalation</th>
<th>Draize Test</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene chloride</td>
<td>&gt; 2000 mg/kg ( Rat )</td>
<td>no data available</td>
<td>= 76000 mg/m³ ( Rat ) 4 h</td>
<td>no data available</td>
<td>no data available</td>
</tr>
<tr>
<td>Petroleum distillates, hydrotreated heavy naphthenic (&lt;3% DMSO extractable)</td>
<td>&gt; 5000 mg/kg ( Rat )</td>
<td>&gt; 2000 mg/kg ( Rabbit )</td>
<td>= 2.18 mg/L ( Rat ) 4 h</td>
<td>no data available</td>
<td>no data available</td>
</tr>
<tr>
<td>Lead chloride</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>
<tr>
<td>Ethyl acetate</td>
<td>= 5620 mg/kg ( Rat )</td>
<td>&gt; 18000 mg/kg ( Rabbit ) &gt; 20 mL/kg ( Rabbit )</td>
<td>no data available</td>
<td>no data available</td>
<td>no data available</td>
</tr>
<tr>
<td>Sodium sulfonate</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>
<tr>
<td>Propylene oxide</td>
<td>= 520 mg/kg ( Rat )</td>
<td>no data available</td>
<td>no data available</td>
<td>no data available</td>
<td>no data available</td>
</tr>
</tbody>
</table>

Chronic Toxicity

<table>
<thead>
<tr>
<th>Component</th>
<th>Mutagenicity</th>
<th>Sensitization</th>
<th>Developmental Toxicity</th>
<th>Reproductive Toxicity</th>
<th>Target Organ Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene chloride</td>
<td>no data available</td>
<td>no data available</td>
<td>no data available</td>
<td>no data available</td>
<td>skin, CVS, eyes, CNS (in animals: lung, liver, salivary and mammary gland tumors)</td>
</tr>
<tr>
<td>Petroleum distillates, hydrotreated heavy naphthenic (&lt;3% DMSO extractable)</td>
<td>no data available</td>
<td>no data available</td>
<td>no data available</td>
<td>no data available</td>
<td>respiratory system</td>
</tr>
<tr>
<td>Carbon Dioxide</td>
<td>no data available</td>
<td>no data available</td>
<td>no data available</td>
<td>no data available</td>
<td>respiratory system, CVS</td>
</tr>
<tr>
<td>Ethyl acetate</td>
<td>no data available</td>
<td>no data available</td>
<td>no data available</td>
<td>no data available</td>
<td>eyes, respiratory system, skin</td>
</tr>
<tr>
<td>Sodium sulfonate</td>
<td>no data available</td>
<td>no data available</td>
<td>no data available</td>
<td>no data available</td>
<td>eye, respiratory system, skin (in animals: nasal tumors), CNS, bone marrow</td>
</tr>
<tr>
<td>Propylene oxide</td>
<td>no data available</td>
<td>skin sensitization</td>
<td>no data available</td>
<td>no data available</td>
<td></td>
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</tbody>
</table>

Carcinogenicity

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene chloride</td>
<td>A3</td>
<td>Group 3B</td>
<td>Reasonably Anticipated</td>
<td>X</td>
<td>not applicable</td>
</tr>
<tr>
<td>Petroleum distillates, hydrotreated heavy naphthenic (&lt;3% DMSO extractable)</td>
<td>not applicable</td>
<td>not applicable</td>
<td>not applicable</td>
<td>not applicable</td>
<td>not applicable</td>
</tr>
<tr>
<td>Carbon Dioxide</td>
<td>not applicable</td>
<td>not applicable</td>
<td>not applicable</td>
<td>not applicable</td>
<td>not applicable</td>
</tr>
<tr>
<td>Ethyl acetate</td>
<td>not applicable</td>
<td>not applicable</td>
<td>not applicable</td>
<td>not applicable</td>
<td>not applicable</td>
</tr>
<tr>
<td>Sodium sulfonate</td>
<td>not applicable</td>
<td>not applicable</td>
<td>not applicable</td>
<td>not applicable</td>
<td>not applicable</td>
</tr>
<tr>
<td>Propylene oxide</td>
<td>A3</td>
<td>Group 3B</td>
<td>Reasonably Anticipated</td>
<td>X</td>
<td>not applicable</td>
</tr>
</tbody>
</table>

12. ECOLOGICAL INFORMATION

Product Information

No information available.

Component Information

<table>
<thead>
<tr>
<th>Component</th>
<th>Toxicity to Algae</th>
<th>Toxicity to Fish</th>
<th>Microtox</th>
<th>Water Flea</th>
<th>Log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene chloride</td>
<td>EC50 = 500 mg/L Pseudokirchneriella subcapitata 72 h</td>
<td>LC50 140.8 - 277.8 mg/L Pimephales promelas 96 h</td>
<td>EC50 = 1 mg/L 24 h</td>
<td>EC50 = 5870 mg/L 15 min</td>
<td>N/A</td>
</tr>
<tr>
<td>Petroleum distillates, hydrotreated heavy naphthenic (&lt;3% DMSO extractable)</td>
<td>no data available</td>
<td>LC50 262 - 855 mg/L Pimephales promelas 96 h</td>
<td>EC50 = 2.98 mg/L 5 min</td>
<td>EC50 = 1500 mg/L 15 min</td>
<td>N/A</td>
</tr>
<tr>
<td>Carbon Dioxide</td>
<td>no data available</td>
<td>LC50 193 mg/L Lepomis macrochirus 96 h</td>
<td>EC50 = 190 mg/L 48 h</td>
<td>EC50 = 1000 mg/L 48 h</td>
<td>N/A</td>
</tr>
<tr>
<td>Ethyl acetate</td>
<td>EC50 = 3000 mg/L Desmodesmus subsppicatus 48 h</td>
<td>LC50 220 - 250 mg/L Pimephales promelas 96 h</td>
<td>EC50 = 0.08 mg/L 6 min</td>
<td>EC50 = 560 mg/L 48 h</td>
<td>0.08</td>
</tr>
<tr>
<td>Sodium sulfonate</td>
<td>no data available</td>
<td>LC50 352 mg/L Pimephales promelas 96 h</td>
<td>no data available</td>
<td>no data available</td>
<td>N/A</td>
</tr>
<tr>
<td>Propylene oxide</td>
<td>EC50 = 400 mg/L Pseudokirchneriella subcapitata 96 h</td>
<td>LC50 = 215 mg/L Lepomis macrochirus 96 h</td>
<td>EC50 = 3300 mg/L 160 min</td>
<td>EC50 = 350 mg/L 48 h</td>
<td>0.08</td>
</tr>
</tbody>
</table>

13. DISPOSAL CONSIDERATIONS

No information available.
Product Disposal
Dispose of in accordance with local regulations.

Container Disposal
Warning! Container under pressure. Do not puncture. Empty remaining contents. Empty containers should be taken for local recycling, recovery, or waste disposal. Do not re-use empty containers.

14. TRANSPORT INFORMATION

DOT
Proper Shipping Name: DOT
Hazard Class: Consumer commodity
Description: Consumer commodity, ORM-D

TDG
Proper Shipping Name: Aerosols
Hazard Class: 2.1
UN-No: UN1950
Description: AEROSOLS, 2.1, UN1950 LTD QTY

ICAO
UN-No: UN1950
Proper Shipping Name: Aerosols
Hazard Class: 2.1
Shipping Description: UN1950, AEROSOLS, FLAMMABLE, 2.1 LTD QTY

IATA
UN-No: UN1950
Proper Shipping Name: Aerosols, flammable
Hazard Class: 2.1
ERG Code: 10L
Shipping Description: UN1950, Aerosols, flammable, 2.1 LTD QTY

IMDG/IMO
Proper Shipping Name: Aerosols
Hazard Class: 2
UN-No: UN1950
EmS No.: F-D, S-U
Shipping Description: UN1950, Aerosols, 2.1 LTD QTY

15. REGULATORY INFORMATION

Inventories
TSCA: Complies
DSL: Complies

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40n of the Code of Federal Regulations, Part 372

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>SARA 313 - Threshold Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene chloride</td>
<td>75-09-2</td>
<td>60-100</td>
<td>0.1</td>
</tr>
<tr>
<td>Propylene oxide</td>
<td>75-56-9</td>
<td>1-5</td>
<td>0.1</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazardous Categorization

Acute Health Hazard: Yes
Chronic Health Hazard: Yes
Fire Hazard: No
Sudden Release of Pressure Hazard: Yes
Reactive Hazard: No

CERCLA

<table>
<thead>
<tr>
<th>Component</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA EHS RQs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methylene chloride</td>
<td>1000 lb</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Petroleum distillates, hydro treated heavy naphthenic (&lt;3% DMSO extractable)</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Carbon Dioxide</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Ethyl acetate</td>
<td>5000 lb</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Sodium sulfonate</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Propylene oxide</td>
<td>100 lb</td>
<td>10000 lb TPQ</td>
</tr>
</tbody>
</table>

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.
WHMIS Hazard Class
A Compressed gases, D1B Toxic materials, D2A Very toxic materials, D2B Toxic materials.

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>Prepared By</th>
<th>Dan Hollas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supercedes Date</td>
<td>09/25/2008</td>
</tr>
<tr>
<td>Issuing Date</td>
<td>09/07/2011</td>
</tr>
<tr>
<td>Reason for Revision</td>
<td>No information available.</td>
</tr>
<tr>
<td>Glossary</td>
<td>No information available.</td>
</tr>
</tbody>
</table>

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