1. Identification

Product number 1000007933
Product identifier METAL CLEANER AND TARNISH REMOVER
Company information Claire Manufacturing Co.
1005 S. Westgate Drive
Addison, IL 60101 United States
Company phone General Assistance 1-630-543-7600
Emergency telephone US 1-866-836-8855
Emergency telephone outside US 1-952-852-4646
Version # 01
Recommended use Not available.
Recommended restrictions None known.

2. Hazard(s) identification

Physical hazards Flammable aerosols Category 1
Health hazards Sensitization, skin Category 1
Environmental hazards Not classified.
OSHA defined hazards Not classified.

Label elements

Signal word Danger
Hazard statement Extremely flammable aerosol. May cause an allergic skin reaction.
Precautionary statement

Prevention Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Avoid breathing gas. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves.
Response If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse. Collect spillage.
Storage Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
Disposal Not available.

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

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butane</td>
<td></td>
<td>106-97-8</td>
<td>2.5 - 10</td>
</tr>
<tr>
<td>Citrus Terpenes</td>
<td></td>
<td>94266-47-4</td>
<td>2.5 - 10</td>
</tr>
<tr>
<td>Propane</td>
<td></td>
<td>74-98-6</td>
<td>1 - 2.5</td>
</tr>
<tr>
<td>Triethanolamine</td>
<td></td>
<td>102-71-6</td>
<td>1 - 2.5</td>
</tr>
</tbody>
</table>

Other components below reportable levels 80 - 90

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.
4. First-aid measures

**Inhalation**
Move to fresh air. Call a physician if symptoms develop or persist.

**Skin contact**
Take off immediately all contaminated clothing. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.

**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**
Rinse mouth.

**Most important symptoms/effects, acute and delayed**
May cause allergic skin reaction. Dermatitis. Rash. Direct contact with eyes may cause temporary irritation. May cause an allergic skin reaction.

**Indication of immediate medical attention and special treatment needed**
Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

**General information**
Take off all contaminated clothing immediately. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

**Suitable extinguishing media**
Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).

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

**Specific hazards arising from the chemical**
Contents under pressure. Pressurized container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.

**Special protective equipment and precautions for firefighters**
Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

**Fire-fighting equipment/instructions**
Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.

**Specific methods**
Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. In the event of fire and/or explosion do not breathe fumes.

**General fire hazards**
Extremely flammable aerosol.

6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures**
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing gas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. 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**
Refer to attached safety data sheets and/or instructions for use. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Isolate area until gas has dispersed. Prevent entry into waterways, sewer, basements or confined areas. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.

**Environmental precautions**
Never return spills in original containers for re-use.

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

Precautions for safe handling
Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Avoid contact with skin, eyes and clothing. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not re-use empty containers. Do not get in eyes, on skin, or on clothing. Avoid breathing gas. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities
Level 1 Aerosol.
Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store in a well-ventilated place. Refrigeration recommended. Store away from incompatible materials (see Section 10 of the SDS). Level 1 Aerosol (NFPA 30B)

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>Propane (CAS 74-98-6)</td>
<td>PEL</td>
<td>1800 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000 ppm</td>
</tr>
<tr>
<td>US. ACGIH Threshold Limit Values</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Butane (CAS 106-97-8)</td>
<td>STEL</td>
<td>1000 ppm</td>
</tr>
<tr>
<td>Triethanolamine (CAS 102-71-6)</td>
<td>TWA</td>
<td>5 mg/m3</td>
</tr>
<tr>
<td>US. NIOSH: Pocket Guide to Chemical Hazards</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Butane (CAS 106-97-8)</td>
<td>TWA</td>
<td>1900 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>800 ppm</td>
</tr>
<tr>
<td>Propane (CAS 74-98-6)</td>
<td>TWA</td>
<td>1800 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1000 ppm</td>
</tr>
</tbody>
</table>

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

Appropriate engineering controls
Explosion-proof general and local exhaust ventilation.

Individual protection measures, such as personal protective equipment

| Eye/face protection | Face shield is recommended. Wear safety glasses with side shields (or goggles). |
| Hand protection     | Wear appropriate chemical resistant gloves. |
| Skin protection     | Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended. |
| Other               | |
| Respiratory protection | If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator. |
| Thermal hazards     | Wear appropriate thermal protective clothing, when necessary. |

General hygiene considerations
When using do not smoke. 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. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance
Physical state: Gas.
Form: Aerosol.
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. Hazardous polymerization does not occur.

Conditions to avoid
Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.

Incompatible materials

Hazardous decomposition products
No hazardous decomposition products are known.
Information on toxicological effects

**Acute toxicity**
May cause an allergic skin reaction. Expected to be a low hazard for usual industrial or commercial handling by trained personnel.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butane (CAS 106-97-8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Inhalation</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Mouse</td>
<td>1237 mg/l, 120 Minutes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>52 %, 120 Minutes</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
<td>1355 mg/l</td>
</tr>
<tr>
<td>Propane (CAS 74-98-6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
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<td></td>
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<td></td>
<td></td>
<td>52 %, 120 Minutes</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
<td>1355 mg/l</td>
</tr>
<tr>
<td></td>
<td></td>
<td>658 mg/l/4h</td>
</tr>
<tr>
<td>Triethanolamine (CAS 102-71-6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Dermal</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rabbit</td>
<td>&gt; 2000 mg/kg</td>
</tr>
<tr>
<td></td>
<td>Oral</td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Rat</td>
<td>6400 mg/kg</td>
</tr>
</tbody>
</table>

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

**Skin corrosion/irritation**
Causes mild skin irritation.

**Serious eye damage/eye irritation**
Direct contact with eyes may cause temporary irritation.

**Respiratory or skin sensitization**

**Respiratory sensitization**
Not a respiratory sensitizer.

**Skin sensitization**
May cause an allergic skin reaction.

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

**Carcinogenicity**
Risk of cancer cannot be excluded with prolonged exposure.

**IARC Monographs. Overall Evaluation of Carcinogenicity**
Triethanolamine (CAS 102-71-6) 3 Not classifiable as to carcinogenicity to humans.

Not listed.

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

**Specific target organ toxicity - single exposure**
Not classified.

**Specific target organ toxicity - repeated exposure**
Not classified.

**Aspiration hazard**
Not an aspiration hazard. Not likely, due to the form of the product.

**Chronic effects**
May be harmful if absorbed through skin. Prolonged exposure may cause chronic effects.

Prolonged or repeated exposure may cause liver and kidney damage. These effects have not been observed in humans.

12. Ecological information

**Ecotoxicity**
Toxic to aquatic life with long lasting effects.
### Components

<table>
<thead>
<tr>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triethanolamine (CAS 102-71-6)</td>
<td></td>
</tr>
<tr>
<td>Aquatic</td>
<td></td>
</tr>
<tr>
<td>Algae</td>
<td>IC50 216 mg/L, 72 Hours</td>
</tr>
<tr>
<td>Crustacea</td>
<td>EC50 565.2 - 658.3 mg/l, 48 hours</td>
</tr>
<tr>
<td>Fish</td>
<td>LC50 10610 - 13010 mg/l, 96 hours</td>
</tr>
<tr>
<td>* Estimates for product may be based on additional component data not shown.</td>
<td></td>
</tr>
</tbody>
</table>

#### Persistence and degradability
No data is available on the degradability of this product.

#### Bioaccumulative potential
No data available.

#### Partition coefficient n-octanol / water (log Kow)

<table>
<thead>
<tr>
<th>Substance</th>
<th>log Kow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Butane</td>
<td>2.89</td>
</tr>
<tr>
<td>Propane</td>
<td>2.36</td>
</tr>
<tr>
<td>Triethanolamine</td>
<td>-1</td>
</tr>
</tbody>
</table>

#### Mobility in soil
No data available.

#### Other adverse effects
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 instructions
Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Local disposal regulations
Dispose in accordance with all applicable regulations.

#### Hazardous waste code
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

#### Waste from residues / unused products
Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

#### 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. Do not re-use empty containers.

### 14. Transport information

#### DOT

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN1950</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>Aerosols, flammable</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>2.1</td>
</tr>
<tr>
<td>Class</td>
<td>2.1</td>
</tr>
<tr>
<td>Subsidiary risk</td>
<td>None</td>
</tr>
<tr>
<td>Label(s)</td>
<td>None</td>
</tr>
<tr>
<td>Packing group</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Special precautions for user</td>
<td>Read safety instructions, SDS and emergency procedures before handling.</td>
</tr>
<tr>
<td>Special provisions</td>
<td>N82</td>
</tr>
<tr>
<td>Packaging exceptions</td>
<td>306</td>
</tr>
<tr>
<td>Packaging non bulk</td>
<td>None</td>
</tr>
<tr>
<td>Packaging bulk</td>
<td>None</td>
</tr>
</tbody>
</table>

This product meets the exception requirements of section 173.306 as a limited quantity and may be shipped as a limited quantity. Until 12/31/2020, the "Consumer Commodity - ORM-D" marking may still be used in place of the new limited quantity diamond mark for packages of UN 1950 Aerosols. Limited quantities require the limited quantity diamond mark on cartons after 12/31/20 and may be used now in place of the "Consumer Commodity ORM-D" marking and both may be displayed concurrently.

#### IATA

<table>
<thead>
<tr>
<th>UN number</th>
<th>UN1950</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
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<td>2.1</td>
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<td>2.1</td>
</tr>
<tr>
<td>Subsidiary risk</td>
<td>-</td>
</tr>
<tr>
<td>Label(s)</td>
<td>2.1</td>
</tr>
<tr>
<td>Packing group</td>
<td>Not applicable.</td>
</tr>
</tbody>
</table>
Environmental hazards: Yes
ERG Code: 10L
Special precautions for user: Read safety instructions, SDS and emergency procedures before handling.
Other information:
  Passenger and cargo aircraft: Allowed.
  Cargo aircraft only: Allowed.
  Packaging Exceptions: LTD QTY

IMDG:
  UN number: UN1950
  UN proper shipping name: AEROSOLS
  Transport hazard class(es):
    Class: 2.1
    Subsidiary risk: -
    Label(s): None
  Packing group: None
  Environmental hazards: Yes
  Marine pollutant: Not applicable.
  EmS: Not available.
  Special precautions for user: Read safety instructions, SDS and emergency procedures before handling.
  Packaging Exceptions: LTD QTY

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

DOT

IATA; IMDG

Marine pollutant

General information: IMDG Regulated Marine Pollutant.
15. Regulatory information

US federal regulations
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

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

SARA 304 Emergency release notification
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
Hazard categories
Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous chemical
No

SARA 313 (TRI reporting)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>% by wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethanolamine</td>
<td>111-42-2</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

Other federal regulations

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)
Butane (CAS 106-97-8)
Propane (CAS 74-98-6)

Safe Drinking Water Act (SDWA)
Not regulated.

US state regulations

US. Massachusetts RTK - Substance List
Butane (CAS 106-97-8)
Propane (CAS 74-98-6)
Triethanolamine (CAS 102-71-6)

US. New Jersey Worker and Community Right-to-Know Act
Butane (CAS 106-97-8)
Propane (CAS 74-98-6)
Triethanolamine (CAS 102-71-6)

US. Pennsylvania Worker and Community Right-to-Know Law
Butane (CAS 106-97-8)
Propane (CAS 74-98-6)
Triethanolamine (CAS 102-71-6)

US. Rhode Island RTK
Butane (CAS 106-97-8)
Propane (CAS 74-98-6)

US. California Proposition 65
WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance
Diethanolamine (CAS 111-42-2) Listed: June 22, 2012

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>
</tbody>
</table>

Product name: METAL CLEANER AND TARNISH REMOVER
Product #: 1000007933 Version #: 01 Issue date: 05-27-2015
<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<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>No</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>No</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>No</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

Issue date: 05-27-2015
Version #: 01

Disclaimer

We cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user’s responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available. The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.