



# Safety Data Sheet (SDS)

Date Prepared/Revised: 09/09/2016 Version no.: 02 Supersedes: (2/23/2015)

## 1.) Identification of the Mixture and of the Company

Product identifier: **Crown Electronic Component Cleaner - Aerosol**

Product name:  
**8377 Electronic Component Cleaner**

Relevant identified uses of the substance: Use on relays, switches, contacts, circuit breakers, plugs and jacks, terminals, circuit boards, generators, electromechanical assemblies and fusible disconnects. Avoid use on certain plastics including ABS, Acrylic, Polycarbonate Polysulfones and Styrene.

Uses advised against: Poorly ventilated areas

|                             |                                                   |
|-----------------------------|---------------------------------------------------|
| CAS No:                     | <b>Not Applicable (mixture)</b>                   |
| EC No:                      | <b>Not Applicable (mixture)</b>                   |
| Index No:                   | <b>Not Applicable (mixture)</b>                   |
| Manufacturer/Supplier:      | <b>Aervoe Industries Incorporated</b>             |
| Street address/P.O. Box:    | <b>1100 Mark Circle</b>                           |
| Country ID/Postcode/Place   | <b>Gardnerville, Nevada 89410</b>                 |
| Telephone number:           | <b>001 (0) 1-775-782-0100</b>                     |
| e-mail:                     | <b>mailbox@aervoe.com</b>                         |
| National contact:           | <b>Aervoe Industries Incorporated</b>             |
| For Product Information:    | <b>001 (0) 1-800-227-0196</b>                     |
| Emergency telephone number: | <b>001 (0) 1-800-424-9300 (CHEMTREC – 24 hrs)</b> |
|                             | <b>English Language Service</b>                   |

## 2. Hazards identification

### Classifications

|                   |                                              |
|-------------------|----------------------------------------------|
| Physical Hazards: | Aerosol – Cat 3<br>Flam. Liq. 2<br>Pres. Gas |
| Health Hazards:   | Eye Irrit. 2<br>STOT SE 3                    |

Environmental Hazards: N/AV

### Labeling

Signal Word: Warning



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Hazard Statements: H225 – Highly flammable liquid and vapour.  
H229 - Pressurized container: may burst if heated  
H319 – Causes serious eye irritation.  
H336 – May cause drowsiness or dizziness.

Precautionary Statements: P101 - If medical advice is needed, have product container or label at hand  
P102 - Keep out of reach of children  
P103 - Read label before use  
P211 - Do not spray on an open flame or other ignition source  
P251 - Pressurized container: Do not pierce or burn, even after use  
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray  
P262 - Do not get in eyes, on skin, or on clothing  
P264 - Wash ... thoroughly after handling  
P280 - Wear protective gloves/eye protection/face protection  
  
P303+P361+P353 - If on skin or hair, remove/takeoff immediately all contaminated clothing. Rinse skin with water/shower.  
P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F  
P501 - Dispose of contents/container in accordance with local/regional/national/international regulation



Symbols/Pictograms:

## 3. Composition / Information on Ingredients

### Composition

| Chemical                    | Synonyms             | CAS Number | EINECS Number | Weight Percent | Hazard Category           | H-Code    |
|-----------------------------|----------------------|------------|---------------|----------------|---------------------------|-----------|
| 1,1,1,2-Tetrafluoroethylene | Norflurane           | 811-97-2   | 212-377-0     | 30-60%         | Compressed gas            | H280      |
| 1,2-Trans-dichloroethylene  | Acetylene dichloride | 156-60-5   | 205-860-2     | 30-60%         | Eye Irrit. 2<br>STOT SE 3 | H319 H336 |
| Methyl                      | Methyl               | 163702-    | N/AV          | 1-5%           | Eye Irrit. 2              | H319 H336 |



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|                                  |                                |             |           |      |                                           |                      |
|----------------------------------|--------------------------------|-------------|-----------|------|-------------------------------------------|----------------------|
| nonafluoro butyl ether           | Perfluorobutyl Ether           | 07-6        |           |      | STOT SE 3                                 |                      |
| Methyl nonafluoro isobutyl ether | Methyl Perfluoroisobutyl Ether | 163702-08-7 | N/AV      | 1-5% | Eye Irrit. 2<br>STOT SE 3                 | H319 H336            |
| Isopropanol                      | Isopropyl Alcohol              | 67-63-0     | 200-661-7 | 1-5% | Flam. Liq. 2<br>Eye Irrit. 2<br>STOT SE 3 | H225<br>H319<br>H336 |

## Other Product Information

Chemical Identity: Mixture

## 4.) First Aid Measures

|                                         |                                                                                                                                                                                             |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General Advice:</b>                  | If symptoms persist, always call a doctor.                                                                                                                                                  |
| <b>Inhalation First Aid:</b>            | Remove victim to fresh air and provide oxygen if breathing is difficult. If not breathing, give artificial respiration, preferably mouth to mouth. Get medical attention immediately.       |
| <b>Skin Contact First Aid:</b>          | Wash with soap and water. Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse.                                                            |
| <b>Eye Contact First Aid:</b>           | If contact with eyes, immediately flush eyes with plenty of water for at least 15 minutes, while holding eyelids open. Get medical attention immediately.                                   |
| <b>Ingestion First Aid:</b>             | If swallowed, wash out mouth with water provided the person is conscious. Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately. |
| <b>Most Important Symptoms/Effects:</b> | Exposure may cause slight irritation to the skin, eyes, and respiratory tract. Excessive exposure may cause central nervous system effects.                                                 |

## 5. Fire Fighting Measures

|                                                        |                                                                                         |
|--------------------------------------------------------|-----------------------------------------------------------------------------------------|
| Flammable Properties:                                  | Non-flammable                                                                           |
| Auto Ignition Temperature:                             | Not Available                                                                           |
| Suitable extinguishing media:                          | Not Available                                                                           |
| Unsuitable extinguishing media:                        | Not Available                                                                           |
| Special hazards arising from the substance or mixture: | Not Available                                                                           |
| Hazardous combustion products:                         | Not Available                                                                           |
| Fire & Explosion Hazards:                              | Closed Containers may rupture due to the buildup of pressure from extreme temperatures. |



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Precautions for fire-fighters: Use water spray to cool containers exposed to heat or fire to prevent pressure build up. In the event of a fire, wear full protective clothing and NIOSH- approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

## 6. Accidental Release Measures

### PERSONAL PRECAUTIONARY MEASURES:

- 1) Follow personal protective equipment recommendations found in section 8.
- 2) Maintain adequate ventilation.

### SPILL CLEAN-UP PROCEDURES:

- 1.) Evacuate unprotected personnel from the area.
- 2.) Remove sources of ignition if safe to do so.
- 3.) Pickup spilled materials using non-sparking tools and place in an appropriate container for disposal.
- 4.) Contain spill to prevent material from entering sewage or ground water systems.
- 5.) Always dispose of waste materials in accordance with all EU, National and Local Regulations.

## 7. Handling and Storage

### Handling:

Non-flammable, use in a well ventilated area.  
Do not use near sources of ignition.  
Do not to eat, drink and smoke while working with this material.  
Wash hands after use.

### Conditions for safe storage, including any incompatibilities:

Store out of direct sunlight.  
Storage Temperature: 32° to 120°F (0° to 49°C).  
No known incompatibilities.

## 8. Exposure Controls / Personal Protection

### Appropriate engineering controls:

Ensure adequate ventilation. A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits.  
Keep away from sources of ignition.  
Take precautionary measures against static discharge.

### Personal Protection:

Eye & face protection devices such as safety glasses, safety goggles or face shield are recommended.

### Skin protection

Wear the appropriate protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.



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## Respiratory protection:

Use only in an adequately ventilated area. For unknown vapor concentrations use a positive-pressure, pressure-demand, self-contained breathing apparatus (SCBA).

| Hazardous Ingredient            | CAS Number  | ACGIH TLV (TWA) | ACGIH TLV (STEL) | OSHA PEL (TWA) | OSHA PEL (STEL) |
|---------------------------------|-------------|-----------------|------------------|----------------|-----------------|
| 1,1,1,2-Tetrafluoroethylene     | 811-97-2    | N/AV            | N/AV             | N/AV           | N/AV            |
| 1,2-Trans-dichloroethylene      | 156-60-5    | 200ppm          | N/AV             | 200ppm         | N/AV            |
| Methyl nonafluorobutyl ether    | 163702-07-6 | 200ppm          | N/AV             | 200ppm         | N/AV            |
| Methyl nonafluoroisobutyl ether | 163702-08-7 | 200ppm          | N/AV             | 200ppm         | N/AV            |
| Isopropanol                     | 67-63-0     | 200ppm          | 400ppm           | 400ppm         | N/AV            |

\*Values are based on the 2014 Guide to Occupational Exposure Values by ACGIH

## 9. Information on Basic Physical and Chemical Properties

|                                               |                                               |
|-----------------------------------------------|-----------------------------------------------|
| Appearance: Clear gas                         | Odor: Ethereal                                |
| Odor Threshold: N/AV                          | pH: Not Applicable (solvent Base)             |
| Melting Point: N/AV                           | Freezing Point: N/AV                          |
| Initial Boiling Point: -27° F / -33° C        | Boiling Point Range: N/AV                     |
| Flash Point: N/AV                             | Evaporation Rate: Faster than n-Butyl Acetate |
| Flammability Solid/Gas: Non-flammable aerosol | LEL: N/AV UEL: N/AV                           |
| Vapor Pressure: N/AV                          | Vapor Density: Heavier Than Air               |
| Relative Density: N/AV                        | Solubility: Negligible                        |
| Partition Coefficient: n-octanol/ water: N/AV | Auto-ignition Temperature: N/AV               |
| Decomposition Temperature: N/AV               | Viscosity: N/AV                               |
| Explosive Properties: N/AV                    | Oxidizing Properties: N/AV                    |

## 10. Stability & Reactivity

Possibility of hazardous reactions: Hazardous polymerization will not occur under normal conditions

Chemical stability: Stable under normal conditions

Conditions to avoid: Heat and ignition sources

Incompatible materials: Strong Oxidizing Agents

Hazardous decomposition products: Will not occur

## 11. Toxicological Information



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Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Repeated overexposure can also damage kidneys, lungs, liver, heart and blood

Routes of exposure: Eyes, skin, ingestion, and/or inhalation

Acute toxicological data: N/AV

Eye irritation data: N/AV

Skin irritation/sensitization/absorption data: N/AV

Reproductive toxicity data: N/AV

Mutagenicity data: N/AV

Symptoms associated with physical contact: N/AV

Acute/chronic effects from short/long term exposure: Irritating to skin. Prolonged/repeated contact may cause defatting of the skin which can lead to dermatitis. Not expected to be a skin sensitizer.

Known reportable carcinogens via the following agencies:

NTP: N/AV

IARC: N/AV

OSHA: N/AV

\* Petroleum distillates may contain chemical carcinogens in limited quantities (< 0.01%). These quantities are determined by the supplier/fraction/purity of the distillate during the manufacturing process. Chemicals that may be present within distillates are listed on California's prop 65 list such as ETHYLBENZENE, BENZENE, and TOLUENE.

## 12. Ecological Information

Ecotoxicity: **No Data Available**

Persistence and degradability: **No Data Available**

Bioaccumulative potential: **No Data Available**

Mobility in soil: **No Data Available**

Results of PBT and vPvB assessment: **No Data Available**

Other adverse effects: **No Data Available**

## 13. Disposal Considerations



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**Waste Disposal:** Dispose of material in accordance with EU, national and local requirements. For proper disposal of used material, an assessment must be completed to determine the proper and permissible waste management options permitted under applicable rules, regulations and/or laws governing your location.

**Product / Packaging disposal:** Dispose of packaging in accordance with federal, state and local requirements, regulations and/or laws governing your location.

## 14. Transportation Information

### US DOT

| UN Number | Proper Shipping Name | Hazard Class | Packing Group  | Marine Pollutant | Special Provisions       |
|-----------|----------------------|--------------|----------------|------------------|--------------------------|
| UN1950    | Aerosols             | 2.1          | Not Applicable | Not Applicable   | Reference 49 CFR 172.101 |

### IMDG

| UN Number | Proper Shipping Name | Hazard Class | Packing Group  | Marine Pollutant | Special Provisions         |
|-----------|----------------------|--------------|----------------|------------------|----------------------------|
| UN1950    | Aerosols             | 2.1          | Not Applicable | Not Applicable   | Reference IMDG code part 3 |

### IATA:

| UN Number | Proper Shipping Name | Hazard Class | Packing Group  | Marine Pollutant | Special Provisions                        |
|-----------|----------------------|--------------|----------------|------------------|-------------------------------------------|
| UN1950    | Aerosols             | 2.1          | Not Applicable | Not Applicable   | Reference IATA Dangerous Goods Regulation |

## 15. Regulatory Information

### Workplace classification:

This product is considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200). The Occupational Safety and Health Administration's interpretation of the product's hazard to workers.

### SARA Title 3:

Section 311/312 Categorizations (40 CFR 372): This product is a hazardous chemical under 29 CFR 1910.1200, and is categorized as an immediate and delayed health, and flammability physical hazard. Superfund Amendment and Reauthorization Act (SARA) category. SARA requires reporting any spill of any hazardous substance.

**TSCA status:** All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

**WHMIS:** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the (M)SDS contains all of the information required by the CPR.

**PROP 65 (CA):** WARNING: This product may contain chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.



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## 16. Other Information

This SDS has been completed in accordance with GHS Rev04 (2011): U.S OSHA, CMA, ANSI, Canadian WHMIS standards, and European Directives.

Date of Preparation/Revision: 9/9/16

Supersedes: (2/23/2015)

To the best of our knowledge, the information contained herein is believed to be accurate. However, the above data does not imply any guarantee or warranty of any kind, expressed or implied. The final determination of the suitability of any material is the sole responsibility of the user. All materials made present un-known hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee these are the only hazards existing.