SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: **Electro Clean Aerosol 400ml (600g)**

Product Code: **7125**

Recommended Use: Non Flammable Heavy Duty Electrical Equipment Cleaner.

Supplier: **Chemz Ltd**
PO Box 113
Whakatu
Hastings
New Zealand
Telephone Number: +64 6 877 9690
Emergency Telephone: 111
New Zealand Poisons Centre: 0800 764 766 (0800POISON)
Australian Poisons Centre: 13 1126 (from anywhere in Australia)

2. HAZARDS IDENTIFICATION

Classified as a Dangerous Good according to NZS 5433:2007 Transport of Dangerous Goods on Land.
Classified as hazardous according to criteria in the HS (Minimum Degrees of Hazard) Regulations 2017.
Subclasses:
Subclass 2.2 - Aerosols (Non-flammable)
Subclass 6.1 Category E - Substances which are acutely toxic.
Subclass 6.3 Category A - Substances that are irritating to the skin.
Subclass 6.4 Category A - Substances that are irritating to the eye.
Subclass 6.7 Category A - Substances that are known or presumed human carcinogens.
Subclass 6.9 Category B - Substances that are harmful to human target organs or systems.
Subclass 9.1 Category A - Substances that are very ecotoxic in the aquatic environment.
Subclass 9.2 Category C - Substances that are harmful in the soil environment.
Subclass 9.3 Category B - Substances that are ecotoxic to terrestrial vertebrates.

Hazard and Precautionary Information:
Warning: Toxic aerosol. Pressurized container: Do not pierce or burn, even after use. Protect from sunlight. Do not expose to temperatures exceeding 50 °C
Danger: May be harmful if swallowed. May be harmful if inhaled. Causes skin irritation. Causes serious eye irritation. May cause cancer. May cause damage to organs through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects. Harmful to the soil environment. Toxic to terrestrial vertebrates. Keep out of reach of children. Read Safety Data Sheet before use. Wash hands thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapours/spray. Specific treatment (see First Aid Measures on this Safety Data Sheet).
DO NOT induce vomiting. IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell.
IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing before re-use. 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 advice/attention. Call a POISON CENTER or doctor/physician if you feel unwell.
IF exposed or concerned: Get medical advice/attention. Get medical advice/attention if you feel unwell. Collect spillage. Avoid release to the environment. In case of a substance that is in compliance with a HSNO approval other than a Part 6A (Group Standards) approval, a label must provide a description of one or more appropriate and achievable methods for the disposal of a substance in accordance with the Hazardous Substances (Disposal) Regulations 2001. This may also include any method of disposal that must be avoided.

3. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENTS	CAS Number	Proportion, %	WES TWA, ppm	WES STEL, ppm
Trichloroethylene	79-01-6	> 60	50	200
Tetrachloroethylene	127-18-4	10 - 30	50	150
Carbon Dioxide	124-38-9	< 10	5000	30000
Non hazardous ingredients		to 100		

4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (Phone New Zealand 0 800 764766) or a doctor.
Inhalation:
Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.
Skin Contact:
If skin contact occurs, remove contaminated clothing and wash skin with running water. If irritation occurs seek medical advice.
Eye Contact:
If in eyes, wash out immediately with water. In all cases of eye contamination it is a sensible precaution to seek medical advice.
Ingestion:
Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Seek medical advice.
Medical attention and special treatment:
Treat symptomatically.

5. FIRE FIGHTING MEASURES

Hazards from combustion products:
Non-combustible material.

Precautions for fire fighters and special protective equipment:
Decomposes on heating emitting toxic fumes, including those of phosgene , hydrogen chloride and oxides of carbon . Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition. Heating can cause expansion or decomposition of the material, which can lead to the containers exploding. If safe to do so, remove containers from the path of fire. Welding or cutting should not be carried out on any vessel likely to contain solvent.

Suitable Extinguishing Media:
Not combustible, however, if material is involved in a fire use: Fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder).

Unsuitable Extinguishing Media:
Water jets.

Hazchem Code: 2Z

6. ACCIDENTAL RELEASE MEASURES

Emergency procedures:
Shut off all possible sources of ignition. Clear area of all unprotected personnel.

Methods and materials for containment and clean up:
In the event of an aerosol can developing a leak, allow to fully discharge in the open air before disposal.

7. HANDLING AND STORAGE

Precautions for safe handling: Avoid skin and eye contact and breathing in vapour, mists and aerosols. Ensure spray nozzle is always directed away from the user.

Conditions for safe storage: Store in cool place and out of direct sunlight. Store away from sources of heat or ignition. Store away from oxidising agents. Keep containers closed when not in use - check regularly for leaks.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits: No value assigned for this specific material by the New Zealand Occupational Safety and Health Service (OSH).
However, Workplace Exposure Standard(s) for constituent(s):

Tetrachloroethylene: WES-TWA 50 ppm, 335 mg/m3; WES-STEL 150 ppm, 1005 mg/m3, A3 Carcinogen
Trichloroethylene: WES-TWA 50 ppm, 269 mg/m3; WES-STEL 200 ppm, 1,070 mg/m3
As published by the New Zealand Occupational Safety and Health Service (OSH).

No Exposure Standards assigned to other constituents.

WES - TWA (Workplace Exposure Standard - Time Weighted Average) - The eight-hour, time-weighted average exposure standard is designed to protect the worker from the effects of long-term exposure. Asphyxiant - gases which can lead to reduction of oxygen concentration by displacement or dilution. The minimum oxygen content in air should be 18% by volume under normal atmospheric pressure.

These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Engineering controls:
Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Exposure Standards. Use in well ventilated areas. Keep containers closed when not in use. An asphyxiant gas which can lead to the displacement or dilution of oxygen. The minimum oxygen content in air should be 18% by volume under normal atmospheric pressure.

Personal Protective Equipment:
The selection of PPE is dependant on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.
Wear clean overalls, safety boots, general purpose gloves (PVC) and safety spectacles. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. For leaking aerosol cans: Blue - Wear clean overalls, safety boots, general purpose gloves (PVC) and full face visor. If risk of inhalation exists, wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.
FOR CONSUMER USE: Wear rubber gloves and eye protection while handling the product. Wash hands after use.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear liquid spray.
Boiling Point:	No specific data. Liquid at normal temperature.
Can Pressure, kPa:	300 – 600
Vapour Density, (Air = 1):	> 1
Flashpoint, C:	Non-flammable
Solubility in Water:	Dispersible

10. STABILITY AND REACTIVITY

Chemical stability: Stable under normal conditions of use.
Conditions to avoid: Avoid exposure to heat, sources of ignition, and open flame.
Incompatible materials: Incompatible with oxidising agents.
Hazardous decomposition products: Oxides of carbon.
Hazardous reactions: Hazardous polymerisation will not occur.

11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:
Ingestion: Swallowing can result in nausea, vomiting and central nervous system depression. If the victim is showing signs of central system depression (like those of drunkeness) there is greater likelihood of the patient breathing in vomit and causing damage to the lungs. Breathing in vomit may lead to aspiration pneumonia (inflammation of the lung).
Eye contact: May be an eye irritant.
Skin contact: Contact with skin may result in irritation. Will have a degreasing action on the skin. Repeated or prolonged skin contact may lead to irritant contact dermatitis.
Inhalation: Breathing in vapour can result in headaches, dizziness, drowsiness, and possible nausea. Breathing in high concentrations can produce central nervous system depression, which can lead to loss of co-ordination, impaired judgement and if exposure is prolonged, unconsciousness. Intentional misuse by deliberately concentrating and breathing the contents can be harmful or fatal.
Long Term Effects:
Available evidence from animal studies indicate that repeated or prolonged exposure to this material could result in effects on the liver and kidneys. Some animal test data suggests a carcinogenic potential for this material. These particular data sets are not considered relevant to normal industrial use but do emphasise the need for care in handling. No evidence of birth defects. No evidence of reproductive effects.
Toxicological Data:
Oral LD50 (rat): 2,629 mg/kg.
Inhalation LC50 (mice): 5,200 ppm/4hr.
SKIN: Mild irritant (rabbit).
EYES: Mild irritant (rabbit).
Tetrachloroethylene: Inhalational Lowest Toxic Concentration (human): 96 ppm/7hr - effects on peripheral and central nervous system and eye irritation. Human data: 50 ppm - odour threshold to unacclimatised persons. 600 ppm - dizziness and incoordination after 10 minutes 2,000 ppm - mild narcosis in 5 minutes. Evidence from animal studies have shown this compound to cause liver and kidney damage at exposure levels well above the occupational exposure limit. Studies in rats and mice at high doses indicate that tetrachloroethylene is an animal carcinogen. Evaluations of possible mechanisms have led to the conclusion that they are of little relevance to humans even at exposure levels well above the occupational exposure limit. Studies in workers have failed to demonstrate a relationship between exposure to tetrachloroethylene and cancer. Tetrachloroethylene has been classified by the International Agency for Research on Cancer (IARC) as a Group 2A agent - The agent is probably carcinogenic to humans.

12. ECOLOGICAL INFORMATION

Ecotoxicity Avoid contaminating waterways.

Persistence/degradability and mobility
Highly volatile and insoluble liquid. Tetrachloroethylene evaporates rapidly from open water systems but persists in groundwater. It is degraded relatively rapidly in the lower atmosphere with a half life of approximately 5 months. It does not deplete ozone. The product is anticipated to be substantially removed in biological treatment processes. The product has no potential for bioaccumulation.

Aquatic toxicity: Toxic to aquatic organisms. May cause long term adverse effects in the aquatic environment.
Log Octanol/Water Partition Coefficient: 3.4
48hr LC50 (Daphnia magna): 3.2-123 mg/L
96hr LC50 (rainbow trout): 4.8-5.8 mg/L (flow-through)

13. DISPOSAL CONSIDERATIONS

Disposal methods: Refer to Waste Management Authority. Advise flammable nature. Do not puncture or burn can when empty; contents are under pressure. If aerosol can develops a leak, allow to fully discharge before disposal. Normally suitable for disposal at approved land waste site.

14. TRANSPORT INFORMATION

Road and Rail Transport:
Classified as a Dangerous Good according to NZS 5433:2007 Transport of Dangerous Goods on Land.
UN No: 1950
Class-primary: 2.2 Aerosols non flammable
Proper Shipping Name: AEROSOLS Non flammable

Marine Transport:
Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.
UN No: 1950

Class-primary 2.2 AEROSOLS Non flammable
Proper Shipping Name: AEROSOLS Non flammable

Air Transport:
Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods
Regulations for transport by air; DANGEROUS GOODS.

UN No: 1950
Class-primary: 2.2 AEROSOLS Non flammable
Proper Shipping Name: AEROSOLS Non flammable

15. REGULATORY INFORMATION

Regulatory information specific for the substance or mixture
This substance is to be managed using the conditions specified in an applicable Group Standard.

HSR Number: HSR002520 Aerosols (Toxic [6.7]) Group Standard 2017

16. OTHER INFORMATION

For further copies of this sheet or other product information contact Chemz LTD.
Reason(s) for Issue:
Revised Primary MSDS
Change to Poisons Requirements
This MSDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Chemz Limited cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material. If clarification or further information is needed, the user should contact their Chemz representative or Chemz Limited at the contact details on page 1. Chemz Limited's responsibility for the material as sold is subject to the terms and conditions of sale.