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Section 1 – IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name:	**Contact Clean Aerosol**
Product Code:	7115
Uses:	Precision electrical and electronic equipment cleaner.
Company:	Chemz Limited
Address:	80 Rangitane Place
	Whakatu, Hastings
Telephone:	+64 6 877 9690
Email:	info@chemz.co.nz
Emergency Phone Number:	0800 764 766 (0800 POISON) National Poison Centre 24 Hr

Section 2 – HAZARDS IDENTIFICATION

Classification of the product

Considered a hazardous substance according to the Hazardous Substances (Hazard Classification) Notice 2020.
Classified as a dangerous goods for transport purposes.

GHS Classifications:

Aerosol Category 2
Eye irritation Category 2
STOT (repeated exposure) Category 2
Hazardous to Aquatic Environment (Chronic) Category 2

HSNO Classifications:

2.1.2A Flammable aerosol
6.4A Irritating to the eye.
6.9B Harmful to human target organs (repeated exposure)
9.1B Ecotoxic in the aquatic environment with long lasting effects

Signal Words: Danger

Hazard Statements:

H222 Extremely flammable aerosol
H229 Pressurised container: May burst if heated
H319 Causes serious eye irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.

Section 3 – COMPOSITION INFORMATION ON INGREDIENTS

Hazardous Ingredients	CAS No.	Proportion, % m/m
Isohexane	64742-49-0	> 60
Ethanol Denatured	64-17-5	10 - 30
Carbon Dioxide (propellant)	124-38-9	< 10
Non-hazardous ingredients	-	to 100

Section 4 – FIRST AID MEASURES

If medical advice is needed, have product container or label at hand.

If exposed or if you feel unwell: Call a POISON CENTRE or doctor.

Eye contact:	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.
Skin contact:	IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice.
Inhalation:	IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTRE or doctor.
Ingestion:	Not considered a normal route of entry. IF SWALLOWED: Immediately call a POISON CENTRE or doctor. Do NOT induce vomiting. Obtain immediate medical attention.
Notes to physician:	Treat symptomatically and supportively. No specific antidote.

Section 5 – FIRE-FIGHTING MEASURES

General fire hazards:	Pressurised container, extremely flammable aerosol.
Specific hazards:	Containers can build up pressure if exposed to heat and/or fire and may explode. Vapours may form an explosive mixture with air. Vapours can travel to a source of ignition and flash back. Contents may float and be re-ignited on surface water.
Further advice:	On burning may emit toxic fumes including those of carbon monoxide and carbon dioxide. Fire fighters to wear self-contained breathing apparatus if risk of exposure to products of combustion.
Extinguishing media:	Use water spray, fog, or foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Do not discharge extinguishing waters into the aquatic environment. Do NOT use straight streams of water.
Protective equipment:	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Firefighting instructions:	In the event of fire, cool containers with water spray to prevent vapour pressure build up. Move containers from fire area if you can do so without risk. Runoff can cause environmental damage.
Hazchem Code:	2YE

Section 6 – ACCIDENTAL RELEASE MEASURES

Minor spills:	Clean up all spills immediately. Remove all sources of ignition. Wipe up with absorbent material. Avoid breathing vapours and contact with skin and eyes. Wear protective clothing, gloves and safety glasses. Provide ventilation in workplace environment if necessary. If safe to do, damaged containers should be placed in a container outdoors, away from all ignition sources.
Major spills:	Evacuate the spill area and move upwind. Call the Fire Brigade. Remove all sources of ignition. No smoking. May be violently or explosively reactive. Increase ventilation if possible. Wear breathing apparatus and protective gloves. If safe to do so, prevent spillage from entering drains or water courses. If material enters drains, advise emergency services. Use absorbent (soil, sand or other inert material). Collect and seal in properly labeled containers for disposal. Undamaged containers should be gathered and stored safely, away from ignition sources.

Section 7 – HANDLING AND STORAGE

Handling Precautions:	Read product label before use. Keep out of reach of children. This product is highly flammable. Keep away from heat and open flames. Do not spray on an open flame or other ignition source. Pressurised container: Do not pierce or burn, even after use. No smoking. Use outdoors or in a well-ventilated area. Avoid breathing spray or vapours. In confined areas, wear a respirator. Wash hands with soap and water after handling.
Storage:	Protect from sunlight. Do not expose to temperatures exceeding 50 °C. Store in a well ventilated, cool, dry place. Do not store in basements or areas where vapours may accumulate. Keep away from heat, sparks, and flame. Store away from incompatible materials. Store locked up.

Section 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits: No value assigned for product. Exposure standards for constituents (NZ WES);

Material	TWA, mg/m^3	STEL, mg/m^3	Cat/Notices
Isohexane	Not available	Not available	Not available
Ethanol	1,880	Not available	Not available
Carbon Dioxide	9,000	54,000	Not available

(bio) - Exposure can also be estimated by biological monitoring.

Emergency Limits (TEEL) **Temporary Emergency Exposure Limits**

Material	TEEL-1	TEEL-2	TEEL-3
Isohexane	1,000 ppm	11,000 ppm**	66,000 ppm ***
Ethanol	Not available	Not available	Not available
Carbon Dioxide	5,000 ppm	30,000 ppm	40,000 ppm

** indicates value is 50 - 99% of LEL, *** indicates value is 100% or more of LEL

Emergency Limits (IDLH) **Immediately Dangerous To Life or Health (IDLH) Values**

Material	Original IDLH	Revised IDLH
Isohexane	Not available	Not available
Ethanol	Not available	Not available
Carbon Dioxide	40,000 ppm	Not available

Additional Information: Wash hands before eating, drinking and smoking.

Engineering Controls: No controls generally required when handling small quantities. Use with adequate ventilation.

Larger quantities: General exhaust is adequate under normal operating conditions. Exhaust ventilation should be designed to prevent accumulation and recirculation in the workplace. Ventilation equipment and lighting should be explosion-resistant.

Protective Equipment: **Eye and face protection:** Safety glasses or goggles.

Skin Protection: No special equipment needed for minor exposure to small quantities. For moderate exposures wear general protective light weight latex gloves. For heavy exposures, wear chemical protective (PVC) and safety boots.

Other Protection: Protective clothing such as overalls, apron and boots are recommended for moderate or heavy use. Operators insulated from earth may develop static charges sufficient to ignite flammable gas/air mixtures. Avoid by wearing low resistivity outer material.

Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace.

Respiratory Protection: Where the concentration of gas/particulates in the breathing zone exceeds the "Exposure Standard" (or ES), respiratory protection is required.

Use Type AX-P filter (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88)

The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator.

Cartridge performance is affected by humidity. Cartridges should be changed after 2 hours of continuous use unless the humidity is less than 75%, when cartridges can be used for 4 hours. Used cartridges should be discarded daily, regardless of the length of time used.

Section 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, liquid spray.

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Odour:	Hydrocarbon, propanol odour.
Odour Threshold:	Not available.
pH:	Not applicable.
Melting Point, °C:	Not available.
Freezing Point, °C:	Not available.
Initial Boiling Point, °C:	56 (base liquid)
Boiling Point Range, °C:	56 – 78 (base liquid)
Flash Point, °C:	< 0 (propellant)
Flammability:	Highly flammable liquid and vapour.
Explosion Limit, % v/v:	**LEL** 1.0% **UEL** 19.0%
Vapour Pressure, kPa:	300 - 600
Vapour Density (Air = 1):	> 1
Relative Density:	0.68
Solubility:	Partially soluble in water.
Partition Coefficient:	Not available (n-octanol/water)
Autoignition Temp, °C:	Not available.
Decomposition Temp, °C:	Not available.
Kinematic Viscosity, mm^2/s:	Not available.
Particle Characteristics:	Not available.

Section 10 – STABILITY AND REACTIVITY

Stability: Stable under normal conditions of use. Not reactive. Avoid oxidisers. Avoid elevated temperatures.

Section 11 – TOXICOLOGICAL INFORMATION

Basis for Assessment: Information given is based on product testing, and/or similar products, and/or components.

Acute Oral Toxicity: LD_{50} estimated to be >5,000 mg/kg (calculation based on component mixture, excluding propellant).

Acute Dermal Toxicity: LD_{50} estimated to be > 3,614 mg/kg (calculation based on component mixture, excluding propellant).

Acute Inhalation Toxicity: LC_{50} estimated to be > 20 mg/L, Rat 4 hour (calculation based on component mixture).

Beware: Deliberately sniffing or inhaling concentrated contents can be harmful or fatal.

Toxicity of Components:

Material	Toxicity	Irritation
Isohexane	Oral (rat) LD_{50} > 5,000 mg/kg Dermal (rabbit) LD_{50} > 3,000 mg/kg Inhalation (rat) LC_{50} > 20 mg/L 4 hr	Slight skin irritant. Moderate eye irritant.
Ethanol	Oral (rat) LD_{50} > 5,000 mg/kg Dermal (rabbit) LD_{50} >5,000 mg/kg Inhalation (rat) LC_{50} > 20 mg/L	Moderate eye irritant.
Carbon Dioxide	Not available	Not available

Not Available: Applies to data either not available or does not fill the criteria for classification.

Skin Irritation: May cause skin irritation. Avoid contact with skin.

Eye Irritation: Spray may be irritating to the eye. Avoid contact with eyes.

Inhalation: Prolonged inhalation of spray may cause drowsiness or dizziness.

Respiratory Irritation: Not expected to cause irritation to the respiratory system.

Sensitisation: Not a contact or respiratory sensitiser.

Mutagenicity: Not expected to be mutagenic.

Carcinogenicity: Not expected to be carcinogenic.

Reproductive toxicity: Not expected to be a reproductive toxicant.

Specific Target Organ Toxicity: Harmful to human target organs (single exposure).

STOT (Narcotic): Inhalation will cause drowsiness or dizziness, particularly over long periods of exposure.

Repeated Dose Toxicity: Not available.

Additional Information: None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as being carcinogens.

Section 12 – ECOTOXICITY INFORMATION

Ecotoxicity: For Hydrocarbons: log Kow 1, BCF ~ 1

Material	Test	Value
Liquid Product	Not available	Not available
Isohexane	Fish LC_{50}, 96 hr Crustacean LC_{50}, Daphnia magna 48 hr Algae EC_{50}, Green algae 72 hr	4.656 mg/L 5.424 mg/L 3.635 mg/L
Ethanol	Fish LC_{50}, Pimephales promelas 96 hr Crustacean LC_{50}, Ceriodaphnia dubia 48 hr Algae EC_{50}, Chlorella vulgaris 72 hr	15,300 mg/L 5,012 mg/L 275 mg/L
Carbon Dioxide	LC_{50} Fish, 96 hr EC_{50} Crustacean, 48 hr EC_{50} Algae 72 hr	2.6 mg/L 1.8 mg/L 3.2 mg/L

Persistence/degradability: No data available for all ingredients (Air, Water, Soil).

Bioaccumulation Potential: No data available.

Mobility in Soil: No data available.

Other Adverse Effects: No data available.

Ecotoxicity: Harmful to aquatic life with long lasting effects.

Mobility: No data available.

Persistence/degradability: No data available.

Bioaccumulation Potential: No data available.

Section 13 – DISPOSAL CONSIDERATIONS

Material Disposal: Product wastes are ecotoxic and should be disposed of in accordance with applicable regulations. Do not dispose into the environment, in drains or in water courses. Waste product should not be allowed to contaminate soil or water.

Large quantities should be degassed by an aerosol recycler. Do not dispose of large quantities of pressurised aerosols in landfills. Incineration in an authorised facility is suggested.

Container Disposal: Recycle empty container if possible or dispose in landfill. Product containers are also considered wastes of the same class of the contents and should be disposed of in accordance with applicable regulations.

If it is a class 6, 8 or 9 it must be disposed by treating it so it is no longer a hazardous substance. If it contains components that are bioaccumulative and not rapidly degradable, it must be treated so that the substance is no longer a hazardous substance.

Container Recycling: Recyclable metal - Recycle if possible. Packages which hazardous content have been appropriately treated to remove residual contents may be recycled.

Workplace: Send empty cans to a metal recycler, approved aerosol recycler or commercial waste stream.
Consumer: Recycle if possible or place empty can in normal household waste stream.

Section 14 – TRANSPORT INFORMATION

Transport: Classified as a Dangerous Good for transport purposes.

Class 2.1 should not be loaded on the same vehicle as Classes 1, 3 (where both are in bulk), 4, 5, and 7. They may be loaded with Classes 3, 6, 8, 9, foodstuffs and foodstuff empties.

Proper Shipping Name: Aerosols

UN Number: 1950

Dangerous Goods Class: 2.1

Transport Labels Required: Class 2 Flammable (Land, Sea and Air)

Land, Sea, Air	MP
	

Subsidiary Risk: Not applicable

Packing Group: Not applicable

Marine Pollutant: Yes

EMS Number F-D, S-U (UN 1950 Flammable aerosols)

DG Segregation: This product is classified as a Dangerous Goods. Consult the Land Transport Rule: Dangerous Goods 2005, and NZS 5433:2012 Transport of Dangerous Goods on Land for information.

Section 15 – REGULATORY INFORMATION

EPA Approval Number: HSR002515 Aerosols (Flammable) Group Standard 2020.

EPA Hsno Controls: Refer to www.epa.govt.nz for information on Controls.

This substance is to be managed using the conditions specified in an applicable Group Standard.

Approved Handler: 2.1.2A - Required for quantities greater than 3,000 litres (aggregate water capacity).

Location Test Certificate: 2.1.2A - Required for quantities greater than 3,000 litres (aggregate water capacity**).**

Tracking: This substance is not a tracked substance.

Inventory Listing NZIOC **(**New Zealand Inventory of Chemicals); All components of this product are listed.

SDS regulations This Safety Data Sheet was prepared in accordance with the EPA Hazardous Substances (Safety Data Sheets) Notice July 2017 (Consolidated 30 September 2022).

Section 16 – OTHER INFORMATION

Additional information Personal Protective Equipment Guidelines: The recommendation for protective equipment contained is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

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Health Effects from Exposure: It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare a report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

Abbreviations

CAS	Chemical Abstract Service number
EMS	Emergency Response Procedures for Ships Carrying Dangerous Goods
EPA	Environmental Protection Agency
GHS	Globally Harmonized System
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC_{50}	Lethal Concentration, 50% / Median Lethal Concentration
LD_{50}	Lethal Dose, 50% / Median Lethal Dose
LEL	Lower Explosion Limit
mg/m^3	Milligrams per Cubic Metre
NZIoC	New Zealand Inventory of Chemicals
N.O.S.	Not otherwise specified
OEL	Occupational Exposure Limit
PEL	Permissible Exposure Limit
STEL	Short-Term Exposure Limit
STOT-RE	Specific target organ toxicity (repeated exposure)
STOT-SE	Specific target organ toxicity (single exposure)
TLV	Threshold Limit Value
TWA	Time Weighted Average
UEL	Upper Explosion Limit

This SDS summarises our best knowledge of the health and safety hazard information. 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.Since we cannot control the conditions under which the product may be used, each user must review this SDS in the context of how the user intends to use the product. End of sds.