SAFETY DATA SHEET

Section 1 – IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: **Circuit Reviver Aerosol 400ml**

Product Code: 7174

Uses: Oil Based Deoxidising & Carbon Removing Cleaner Aerosol

Company: Chemz Limited

Address: 80 Rangitane Place
Whakatu, Hastings

Telephone: +64 6 877 9690

Email: info@chemz.co.nz

Emergency Number 24 hr: 0800 764 766 (0800 POISON) National Poison Centre

Section 2 – HAZARDS IDENTIFICATION

Classification of the product

Considered a hazardous substance according to the Hazardous Substance (Minimum Degrees of Hazard) Regulations NZ.
Classified as a dangerous goods for transport purposes.

GHS Classifications:

Aerosol Category 1
Skin irritation Category 2
Eye irritation Category 2
Specific target organ toxicity single exposure Category 3
Hazardous to the aquatic environment chronic Category 2

HSNO Classifications:

2.1.2A Flammable aerosol
6.3A Irritating to the skin
6.4A Irritating to the eye
6.9B Harmful to human target organs or systems Narcotic
9.1B Ecotoxic in aquatic environment with long lasting effects

Signal Words: Danger

Hazard Statements

H222 Extremely flammable aerosol
H229 Pressurised container: May burst if heated
H315 May cause skin irritation
H319 May cause serious eye irritation
H336 May cause drowsiness or dizziness
H411 Toxic to aquatic life with long lasting effects

Section 3 – COMPOSITION INFORMATION ON INGREDIENTS

Hazardous Ingredients	CAS No.	Proportion, % m/m
Isopropyl Alcohol	67-63-0	30 - 60
Isohexane	64742-49-0	30 - 60
Oleic Acid	112-80-1	< 10
Paraffinic Mineral Oil, Highly Refined	64742-62-7	< 10
LPG (butane, propane)	68476-85-7	10 - 30

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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.

Ingestion: Not considered a normal route of entry. IF SWALLOWED: Immediately call a POISON CENTRE or doctor. Do NOT induce vomiting. Where there is risk of vomiting, lean person forward or place on left side to avoid aspiration of product into lungs. Obtain immediate medical attention.

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.

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.

Fire fighting 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: Spills may be extremely slippery. Clean up all spills immediately. Remove all sources of ignition. If safe to do, damaged cans should be placed in a container outdoors, away from all ignition sources, until pressure has dissipated. Undamaged cans should be gathered and stowed safely. Provide ventilation. Wash with water.

Major spills: Evacuate the spill area. Call the Fire Brigade. Remove all sources of ignition. 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.

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

Use in a well-ventilated area. Avoid breathing spray. 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. Keep away from heat, sparks, and flame. Store locked up.

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Section 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

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

Material	TWA, mg/m³	STEL, mg/m³
Isopropyl alcohol	983	1,230
Oil Mist, Mineral	5	10
LPG (butane, propane)	1,800	-

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

Engineering Controls: No controls 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: General protective gloves are recommended as product may cause an allergenic reaction. In an industrial environment: chemical protective gloves, safety glasses or chemical goggles are recommended. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace.

In case of inadequate ventilation, wear respiratory protection. If TWA is exceeded, wear an approved respirator with a type A filter.

Section 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Clear light red liquid spray.

pH: Not applicable.

Vapour Density: > 1 (Air =1)

Vapour Pressure, kPa: 300 - 600

Boiling Point, °C: About 80

Melting Point, °C: Not applicable.

Specific Gravity: About 0.7

Flash Point, °C: < 0 (propellant)

Explosion Limit, % v/v: **LEL** 1.0% **UEL 7.0**%

Autoignition Temp, °C: > 200

Solubility: Partially soluble in water.

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 (based on component mixture, excluding propellant).

Acute Dermal Toxicity: LD_{50} estimated to be > 2,000 mg/kg (based on component mixture, excluding propellant).

Acute Inhalation Toxicity: LC_{50} estimated to be > 20 mg/L, Rat 4 hour (based on component mixture). Inhalation of vapours may cause drowsiness (narcotic) and dizziness.

Skin Irritation: Prolonged/repeated contact may cause defatting of the skin and dermatitis. Avoid contact with skin.

Eye Irritation: Spray is irritating to the eye. Expected to be reversible in 7 - 21 days.

Respiratory Irritation: Inhalation of vapours or mists may cause irritation to the respiratory system.

Sensitisation: Not expected to be a respiratory sensitiser.

Repeated Dose Toxicity: Prolonged contact with product may result in irritant contact dermatitis. Avoid skin contact.

Mutagenicity: Not expected to be mutagenic.

Carcinogenicity: Not expected to be carcinogenic.

Reproductive toxicity: Not expected to be toxic.

Section 12 – ECOTOXICITY INFORMATION

Ecotoxicity: Ecotoxic in the aquatic environment. No environmental hazard is anticipated with small volumes of product, provided that it is handled and disposed of with due care and attention.

Mobility: Not determined.

Persistence/degradability: Inherently biodegradable.

Bioaccumulation Potential: Bioaccumulation may occur.

Section 13 – DISPOSAL CONSIDERATIONS

Material Disposal: Product wastes should be disposed of in accordance with applicable regulations. Do not dispose into the environment, in drains or in water courses.

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. Product containers are also considered wastes of the same class of the contents and should be disposed of in accordance with applicable regulations.

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), EHSM (Sea and Air)

Land, Sea, Air

Sea, Air

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.

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Section 15 – REGULATORY INFORMATION

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.
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.

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.

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

AICS	Australian Inventory of Chemical Substances
ADG	Australian Code for the Transport of Dangerous Goods by Road and Rail
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 msds.