SAFETY DATA SHEET

Section 1 – IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name:	**Hand Sanitiser Aerosol**
Product Code:	9232 150 ml, 9234 400 ml
Uses:	Hand sanitiser
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 1
Eye irritation Category 2

HSNO Classifications:

2.1.2A Flammable aerosol
6.4A Irritating to the eye

Signal Words: Danger

Hazard Statements:

H222 Extremely flammable aerosol
H229 Pressurised container: May burst if heated
H319 Causes serious eye irritation.

Section 3 – COMPOSITION INFORMATION ON INGREDIENTS

Hazardous Ingredients	CAS No.	Proportion, % m/m
Ethanol Denatured	64-17-5	30 - 60
Benzalkonium Chloride	68424-85-1	< 1
LPG (butane, propane)	68476-85-7	10 - 30
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.

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.

Skin contact: IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice.

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. 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: For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

For large fires, 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 in a well-ventilated area. Avoid breathing spray or vapours. In confined areas, wear a respirator.

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);

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Material	TWA, mg/m^3	STEL, mg/m^3	Cat/Notices
Ethanol	1,880	Not available	Not available
Butane	1,900	Not available	Not available
Propane	Simple Asphyxiant	Not available	Not available

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

Material	TEEL-1	TEEL-2	TEEL-3
Ethanol	Not available	Not available	Not available
Butane	Not available	Not available	Not available
Propane	Not available	Not available	Not available

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

Material	Original IDLH	Revised IDLH
Ethanol	15,000 ppm	3,300 (LEL) ppm
Butane	1,600 ppm	Not available
Propane	Not available	2,100 ppm

Material Data Butane: Odour Threshold Value 2590 ppm (recognition)

Butane in common with other straight chain saturated aliphatic hydrocarbons is not characterised by its toxicity but by its narcosis-inducing effects at high concentrations. It is considered that this limit will protect workers against drowsiness and other narcotic effects.

Butane Odour Safety Factor (OSF) = 0.22

Propane: Odour Safety Factor (OSF) = 0.16

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.

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Section 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear liquid spray.

Odour: Ethanolic odour.

Odour Threshold: Not available.

pH: Not applicable.

Melting Point, °C: Not available.

Freezing Point, °C: Not available.

Initial Boiling Point, °C: 78 (base liquid)

Boiling Point Range, °C: 78 – 100 (base liquid)

Flash Point, °C: < 0 (propellant)

Flammability: Highly flammable liquid and vapour.

Explosion Limit, % v/v: **LEL** 1.2% **UEL** 9.5%

Vapour Pressure, kPa: 300 - 600

Vapour Density (Air = 1): > 1

Relative Density: 0.75

Solubility: 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 (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).

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

Toxicity of Components:

Material	Toxicity	Irritation
Ethanol	Oral (rat) LD_{50} 7,060 mg/kg Dermal (rabbit) LD_{50} 7,430 mg/kg Inhalation (rat) LC_{50} 124.7 mg/L	Moderate eye irritant.
Benzalkonium Chloride	Oral (rat) LD_{50} 398 mg/kg Dermal (rabbit) LD_{50} 2848 mg/kg Inhalation (rat) LC_{50} 0.53 mg/L 4 hr	Not a skin or eye irritant.
Hydrocarbon Propellant	Oral (rat) LD_{50} > 10,000 mg/kg Dermal (rabbit) LD_{50} > 10,000 mg/kg Inhalation (rat) LC_{50} 438 mg/L 4 hr	Not a skin or eye irritant.

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

Skin Irritation: Not expected to be an irritant.

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

Inhalation: Not expected to have any effect.

Respiratory Irritation: Not expected to be irritant.

Sensitisation: Not expected to be 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: Not expected to be harmful to human target organs.

STOT (Narcotic): Not expected to be narcotic.

Repeated Dose Toxicity: Not expected to be toxic on repeated exposure.

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	Source
Liquid Product	Not available	Not available	Not available
Benzalkonium Chloride	LC_{50} Fish, 96 hr EC_{50} Crustacean, 48 hr EC_{50} Algae 96 hr	0.064 mg/L 0.0059 mg/L 0.085 mg/L	US EPA US EPA US EPA
Ethanol	LC_{50} Fish, 96 hr EC_{50} Crustacean, 48 hr EC_{50} Algae 72 hr	15,300 mg/L 5012 mg/L 275 mg/L	Echa Echa Echa

Ecotoxicity: May be harmful slightly to aquatic life with long lasting effects.

Mobility: No data available for all ingredients.

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

Bioaccumulation Potential: Not expected to meet the screening criteria for bioaccumulation.

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

Subsidiary Risk: Not applicable

Packing Group: Not applicable

Marine Pollutant: No

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.

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.

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

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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.