SAFETY DATA SHEET

Section 1 – IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name:	**Z7 Brakeclean Liquid**
Product Code:	7818 5L, 7819 20L
Uses:	Brake, clutch and industrial parts cleaner.
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:		**HSNO Classifications:**
Flammable Liquids Category 2	3.1B	Flammable Liquids: high hazard
Acute Tox (Oral) Category 4	6.1D	Acutely toxic, oral (Harmful)
Aspiration hazard Category 1	6.1E	Acutely toxic (Aspiration)
Skin irritation Category 2	6.3A	Irritating to the skin
Eye irritation Category 2	6.4A	Irritating to the eye
Carcinogenicity Category 1	6.7A	Known or presumed human carcinogen
STOT (repeat) Category 2 (oral, inhaled)	6.9B	Harmful to human target organs or systems (oral, inhaled) repeated
STOT (single exposure) Category 3 (Narcotic)	6.9B	Harmful to human target organs (Narcotic)
Aquatic toxicity (chronic) Category 2	9.1B	Toxic to the aquatic environment with long lasting effects

Signal Words: Danger

Hazard Statements

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H320	Causes eye irritation.
H350	May cause cancer
H371	May cause drowsiness or dizziness (Narcotic).
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

SAFETY DATA SHEET

Section 3 – COMPOSITION INFORMATION ON INGREDIENTS

Hazardous Ingredients	CAS No.	Proportion, % m/m
Naphtha (petroleum), Hydrotreated Light	64742-49-0	30 - 60
Dichloromethane	75-09-2	10 – 30
Perchloroethylene	127-18-4	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.

Ingestion: IF SWALLOWED: Immediately call a POISON CENTRE or doctor. Do NOT induce vomiting. Obtain immediate medical attention.

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.

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.

Notes to physician: Treat symptomatically and supportively. No specific antidote.

Section 5 – FIRE-FIGHTING MEASURES

General fire hazards: Extremely flammable liquid. Liquid and vapour are highly flammable.

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 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: 3YE

Section 6 – ACCIDENTAL RELEASE MEASURES

Minor spills: Clean up all spills immediately. Remove all sources of ignition. If safe to do, damaged containers should be placed in a container outdoors, away from all ignition sources. Undamaged containers 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: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

SAFETY DATA SHEET

Read product label before use. Keep out of reach of children. Avoid all personal contact, including inhalation.

This product is highly flammable. Keep away from heat and open flames. No smoking. Do not use near an open flame or other ignition source.

Use in a well-ventilated area. Avoid breathing vapours. Wash hands with soap and water after handling.

Storage: Store in a well ventilated, cool, dry place. Keep away from heat, sparks, and flame. Keep container tightly closed. Store locked up. Do not store in basements or areas where vapours may accumulate. Keep away from heat, sparks, and flame. Store away from incompatible materials.

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
Naphtha (petroleum), Hydrotreated Light	1,640	2,050
Dichloromethane 6.7B	174	-
Perchloroethylene 6.7A skin	136	271

Additional Information: Wash hands before eating, drinking and smoking. Do not use aluminium or galvanised containers.

Engineering Controls: No controls generally required when handling small quantities. Do not breathe vapours. 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

Physical state: Clear, almost colourless liquid.

Odour: Characteristic odour.

Odour Threshold: Not available.

pH: Not applicable.

Melting Point, °C: Not available.

Freezing Point, °C: Not available.

Initial Boiling Point, °C: 40

Boiling Point Range, °C: 40 - 122

Flash Point, °C: - 15

Flammability: Highly flammable liquid and vapour.

Explosion Limit, % v/v: **LEL** 1.0% **UEL** 22.0%

Vapour Pressure, kPa: 46

Vapour Density (Air = 1): > 1

Relative Density: 0.96

Solubility: Negligible 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. Avoid oxidisers. Avoid elevated temperatures. May reacts violently with strong oxidisers, strong alkalis, powdered chemically active metals such as aluminium, barium, beryllium, lithium and zinc.

Perchloroethylene: decomposes slowly in contact with water or moisture forming trichloroacetic acid and hydrochloric acid. Corrodes metals in the presence of moisture. Can oxidise in presence of air and light.

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 3,600 mg/kg (based on component mixture).

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

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

High concentrations may cause drowsiness or dizziness and lead to central nervous system depression resulting in headaches and nausea.

Aspiration Hazard: May be fatal if swallowed and enters airways.

Toxicity of Components:

Material	Toxicity	Irritation
Naphtha (petroleum), Hydrotreated Light	Oral (rat) LD_{50} > 5,000 mg/kg Dermal (rabbit) LD_{50} >5,000 mg/kg Inhalation (rat) LC_{50} 29.3 mg/L 4 hr	Not available
Dichloromethane	Oral (rat) LD_{50} 1,400 mg/kg Dermal (rabbit) LD_{50} >2,000 mg/kg Inhalation LC_{50} 10 – 56 mg/L 6 hr	Skin and eye irritant.
Perchloroethylene	Oral (rat) LD_{50} 2,600 mg/kg Dermal (rabbit) LD_{50} > 2,000 mg/kg Inhalation (rat) LC_{50} 27 mg/L 4 hr	Eye irritant.

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

Skin Irritation:	May cause skin irritation and defatting of the skin which can lead to dermatitis. Avoid contact with skin.
Eye Irritation:	May cause eye irritation. Avoid contact with eyes.
Inhalation:	May cause drowsiness or dizziness. Inhalation will cause narcotic effects.
Respiratory Irritation:	Inhalation of vapours may cause irritation to the respiratory system.
Sensitisation:	Not expected to be a contact or respiratory sensitiser.
Mutagenicity:	Not expected to be mutagenic.
Carcinogenicity:	Contains components which are probably carcinogenic to humans.
Reproductive toxicity:	Not expected to be toxic.
Specific Target Organ Toxicity:	Harmful to human target organs or systems (repeated exposure).
STOT (Narcotic):	Prolonged inhalation of vapours may be narcotic and cause drowsiness or dizziness.
Repeated Dose Toxicity:	Central nervous system: repeated exposure may affect the nervous system. Prolonged contact with product may result in irritant contact dermatitis.
Additional Information:	Contains components at concentrations equal to or greater than 0.1% that are listed by IARC, NTP, OSHA or ACGIH as being probably carcinogenic to humans.

Section 12 – ECOTOXICITY INFORMATION

Ecotoxicity:	Components are harmful to aquatic life with long lasting effects.
Persistence/degradability:	No data available for all ingredients. Not readily biodegradable. Some components may be persistent.
Mobility in Soil:	No data available for all ingredients. Some components show low soil mobility.
Bioaccumulation Potential:	Has the potential to bioaccumulate.

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 handled by a suitable disposal facility. 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 plastic – Recycle if possible. Packages which hazardous content have been appropriately treated to remove residual contents removed may be recycled. **Workplace:** Send empty containers to a plastics recycler or commercial waste stream.

Section 14 – TRANSPORT INFORMATION

Transport:	Classified as a Dangerous Good for transport purposes.
Proper Shipping Name:	FLAMMABLE LIQUID, TOXIC, N.O.S. (contains Hydrocarbons, Dichloromethane, Perchloroethylene)
UN Number:	1992
Dangerous Goods Class:	3
Transport Labels Required:	Class 3 Flammable, Marine Pollutant (Land, Sea and Air)

SAFETY DATA SHEET

Subsidiary Risk:	6.1
Packing Group:	II
Marine Pollutant:	Yes
EMS Number	F-E, S-D
Limited Quantity:	1 L
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:	HSR002652 Solvents (Flammable, Carcinogenic) Group Standard 2020. This substance is to be managed using the conditions specified in the applicable.
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
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 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 Ltd 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.

End of sds.