

Safety Data Sheet

Keep-Kleen

Issue date September 2025

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1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION (KEEP-KLEEN)

Product name: KEEP KLEEN

Other Names: Quaternary ammonium compounds, benzyl-C12-16-alkyldimethylchlorides

Product Code: KKK5, KKK20, KKK100, KKK1000, ZSFQUAT

CAS 68424-85-1 UN Number 1760

Recommended use: Outdoor cleaner. Moss, mould, and lichen treatment.

Supplier: HamChem - Hamilton Chemicals Ltd

Address 75 Ruffell Road,
Te Rapa Park,
Hamilton 3200
New Zealand

Telephone: +64 7 974 4971

Email: sales@hamchem.nz

In emergency dial 111, and then ask for Fire, Ambulance or Police as necessary.

In case of poisoning phone National Poisons Centre – 0800 764 766

2. HAZARDS IDENTIFICATION (KEEP-KLEEN)

This material is hazardous according to criteria of EPA New Zealand.

EPA Group Standard: HSR002491 - Additives, Process Chemicals and Raw Materials (Corrosive) Group Standard



Signal Word

Danger

GHS Classifications

Skin corrosion - Category 1B

Serious eye damage - Category 1

Acute hazard to the aquatic environment - Category 1

Hazard Statements

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

H332 Harmful if inhaled.

Prevention Precautionary Statements

P102 Keep out of reach of children.

P103 Read carefully and follow all instructions.

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe dust, fume, gas, mist, vapours or spray.

P262 Do not get in eyes, on skin, or on clothing.

P264 Wash hands, face and all exposed skin thoroughly after handling.

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P270 Do

not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing including eye/face protection.

Response Precautionary Statements

P101 If medical advice is needed, have product container or label at hand.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor/insert appropriate source of emergency medical advice.

P330 Rinse mouth.

P363 Wash contaminated clothing before reuse.

Storage Precautionary Statement

P405 Store locked up.

Disposal Precautionary Statement

P501 Dispose of contents/container in accordance with local, regional, national and international regulations.

DANGEROUS GOOD CLASSIFICATION

Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

Dangerous Goods Class: 8

3. COMPOSITION INFORMATION (KEEP-KLEEN)

CHEMICAL ENTITY	CAS NO	PROPORTION (w/w)
Benzyl-C12-16-alkyldimethylammonium chloride	68424-85-1	50.0 %
Ingredients determined to be Non-Hazardous		Balance
		= 100%

4. FIRST AID MEASURES (KEEP-KLEEN)

If poisoning occurs, contact a doctor or Poisons Information Centre New Zealand 0800 764 766.

Inhalation: Remove victim from 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 breathing laboured and patient cyanotic (blue), ensure airways are clear and have a qualified person give oxygen through a facemask. If breathing has stopped apply artificial respiration at once. In the event

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of cardiac arrest, apply external cardiac

massage. Seek immediate medical advice.

Skin Contact: This material, or a component of the material, can be absorbed through the skin with resultant toxic effects. If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. If swelling, redness, blistering or irritation occurs seek medical assistance. For gross contamination, immediately drench with water and remove clothing. Continue to flush skin and hair with plenty of water (and soap if material is insoluble). For skin burns, cover with a clean, dry dressing until medical help is available. If blistering occurs, do NOT break blisters. If swelling, redness, blistering, or irritation occurs seek medical assistance.

Eye contact: Immediately irrigate with copious quantities of water for 15 minutes. Eyelids to be held open. Remove clothing if contaminated and wash skin. Urgently seek medical assistance. Transport to hospital or medical centre.

Ingestion: Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water to drink. Never give anything by the mouth to an unconscious patient. If vomiting occurs give further water. Immediately call Poisons Centre or Doctor.

PPE for First Aiders: Wear rubber boots, overalls, gloves, apron, chemical goggles, dust mask. Available information suggests that gloves made from nitrile rubber should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

Notes to physician: Treat symptomatically. Can cause corneal burns.

5. FIRE FIGHTING MEASURES (KEEP-KLEEN)

Hazchem Code: 2X

Suitable extinguishing media: If material is involved in a fire use water fog (or if unavailable fine water spray), alcohol resistant foam, standard foam, dry agent (carbon dioxide, dry chemical powder).

Specific hazards: Combustible material.

Fire fighting further advice: On burning or decomposing may emit toxic fumes. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion or decomposition.

6. ACCIDENTAL RELEASE MEASURES (KEEP-KLEEN)

SMALL SPILLS

Wear protective equipment to prevent skin and eye contamination. Avoid inhalation of vapours or dust. Wipe up with absorbent (clean rag or paper towels). Collect and seal in properly labelled containers or drums for disposal.

LARGE SPILLS

Clear area of all unprotected personnel. Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert

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labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services.

material). Collect and seal in properly

Dangerous Goods - Initial Emergency Response Guide No: 37

7. HANDLING AND STORAGE (KEEP-KLEEN)

Handling: Avoid eye contact and skin contact. Avoid inhalation of vapour, mist or aerosols.

Storage: Store in a cool, dry, well-ventilated place and out of direct sunlight. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Store away from sources of heat and/or ignition. Store locked up. Keep container standing upright. Keep containers closed when not in use - check regularly for leaks.

This material is classified as a Class 8 Corrosive as per the criteria of the "New Zealand NZS5433: Transport of Dangerous Goods on Land" and/or the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and must be stored in accordance with the relevant regulations.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION (KEEP-KLEEN)

National occupational exposure limits: No value assigned for this specific material by WorkSafe New Zealand.

Biological Limit Values: As per the WorkSafe New Zealand the ingredients in this material do not have a Biological Limit Allocated.

Engineering Measures: Natural ventilation should be adequate under normal use conditions..

Personal Protection Equipment: RUBBER BOOTS, OVERALLS, GLOVES, APRON, CHEMICAL GOGGLES, DUST MASK.

Personal protective equipment (PPE) must be suitable for the nature of the work and any hazard associated with the work as identified by the risk assessment conducted.

For additional facial protection, use a face shield as well as chemical goggles.

Wear rubber boots, overalls, gloves, apron, chemical goggles, dust mask. Available information suggests that gloves made from nitrile rubber should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

Hygiene measures: Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke. Wash hands prior to eating, drinking or smoking. Avoid contact with clothing. Avoid eye contact and skin contact. Avoid inhalation of vapour, mist or aerosols. Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES (KEEP KLEEN)

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Material Family:	Organic Material
Base Units:	Kilogram
Form:	Liquid
Colour:	Colourless to pale yellow
Odour:	Slight
Solubility:	Miscible in water
Solubility in water:	Miscible
Specific Gravity:	0.974
Relative Vapour Density (air=1):	Not available
Vapour Pressure (20 °C):	Not available
Flash Point (°C):	Not available
Flammability Limits (%):	Not available
Autoignition Temperature (°C):	Not available
Melting Point/Range (°C):	Not available
Boiling Point/Range (°C):	100 °C
Decomposition Point (°C):	Not available
Sublimation Point (°C):	Not available
Dropping Point (°C):	Not available
pH:	6.5 – 7.5
Viscosity:	Not available
Surface Tension:	Not available
Evaporation Rate (n-Butyl acetate=1):	Not available
Partition Coefficient:	Not available
Total VOC (g/Litre):	Not available
Odour Threshold:	Not available
Explosive properties:	Not available
Oxidising properties:	Not available
% Volatile by Volume:	Not available
Molecular Formula:	Not available
Molecular Weight:	Not available

(Typical values only - consult specification sheet)

N Av = Not available, N App = Not applicable

10. STABILITY AND REACTIVITY (KEEP-KLEEN)

Chemical stability: This material is thermally stable when stored and used as directed.

Conditions to avoid: Elevated temperatures and sources of ignition.

Incompatible materials: Oxidising agents.

Hazardous decomposition products: Oxides of carbon and nitrogen, smoke and other toxic fumes.

Hazardous reactions: No known hazardous reactions.

11. TOXICOLOGICAL INFORMATION (KEEP-KLEEN)

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:

Acute Effects

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Inhalation: Harmful if inhaled. Material

may be an irritant to mucous membranes and respiratory tract.

Skin contact: Harmful in contact with skin. Can be absorbed through the skin with resultant toxic effects. Contact with skin will result in severe irritation. Corrosive to skin - may cause skin burns.

Ingestion: Harmful if swallowed. Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain and chemical burns to the gastrointestinal tract.

Eye contact: A severe eye irritant. Corrosive to eyes: contact can cause corneal burns. Contamination of eyes can result in permanent injury.

Acute toxicity

Inhalation: This material has been classified as a 6.1D - Substances that are acutely toxic. Acute toxicity estimate (based on ingredients): $10.0 < LC50 \leq 20.0$ mg/L for vapours or $1.0 < LC50 \leq 5.0$ mg/L for dust and mist

Skin contact: This material has been classified as a 6.1D - Substances that are acutely toxic. Acute toxicity estimate (based on ingredients): 1,000 - 2,000 mg/Kg bw

Ingestion: This material has been classified as a 6.1D - Substances that are acutely toxic. Acute toxicity estimate (based on ingredients): 300 - 2,000 mg/Kg bw

Corrosion/Irritancy: Eye: this material has been classified as a 8.3A - Substances that are corrosive to ocular tissue. Skin: this material has been classified as a 8.2B - Substances that are corrosive to dermal tissue.

Sensitisation: Inhalation: this material has been classified as not a respiratory sensitiser. Skin: this material has been classified as not a skin sensitiser.

Aspiration hazard: This material has been classified as non-hazardous.

Specific target organ toxicity (single exposure): This material has been classified as non-hazardous.

Chronic Toxicity

Mutagenicity: This material has been classified as non-hazardous.

Carcinogenicity: This material has been classified as non-hazardous.

Reproductive toxicity (including via lactation):

This material has been classified as non-hazardous.

Specific target organ toxicity (repeat exposure): This material has been classified as non-hazardous.

12. ECOLOGICAL INFORMATION (KEEP-KLEEN)

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Avoid contaminating waterways.

Acute aquatic hazard: This material has been classified as non-hazardous. Acute toxicity estimate (based on ingredients): >100 mg/L

Long-term aquatic hazard: This material has been classified as non-hazardous. Non-rapidly or rapidly degradable substance for which there are adequate chronic toxicity data available OR in the absence of chronic toxicity data, Acute toxicity estimate (based on ingredients): >100 mg/L, where the substance is not rapidly degradable and/or BCF < 500 and/or log K_{ow} < 4.

Ecotoxicity in the soil environment: This material has been classified as non-hazardous.

Ecotoxicity to terrestrial vertebrates: This material has been classified as non-hazardous.

Ecotoxicity to terrestrial invertebrates: This material has been classified as non-hazardous.

Ecotoxicity: No information available.

Persistence and degradability: No information available.

Bioaccumulative potential: Risk of bioaccumulation in an aquatic species is low. The reported BCF for benzalkyl chain quaternary ammonium compounds with C10-14 alkyl chains in the fish *Cyprinus carpio* was in the range of 0.2 to 5.9 L/kg at a test concentration of 0.5 mg/L and 1.8 to 8.6 L/kg at a test concentration of 0.05 mg/L (SYKE, 2014). The BCF for benzalkyl chain quaternary ammonium compounds with C12-16 alkyl chains in the fish *Lepomis macrochirus* was 79 L/kg (whole body wet weight) after 35 days of exposure at a test concentration of 0.076 mg/L (ECHA, 2015a).

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS (KEEP-KLEEN)

Persons conducting disposal, recycling or reclamation activities should ensure that appropriate personal protection equipment is used, see "Section 8. Exposure Controls and Personal Protection" of this SDS.

If possible material and its container should be recycled. If material or container cannot be recycled, dispose in accordance with local, regional, national and international regulations.

14. TRANSPORT INFORMATION (KEEP-KLEEN)

ROAD AND RAIL TRANSPORT

Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

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UN No: 1760
Dangerous Goods Class: 8
Packing Group: III
Hazchem Code: 2X
Emergency Response Guide No: 37
Proper Shipping Name: CORROSIVE LIQUID, N.O.S.

Segregation Dangerous Goods: Not to be loaded with explosives (Class 1), dangerous when wet substances (Class 4.3), oxidising agents (Class 5.1), organic peroxides (Class 5.2), radioactive substances (Class 7) or food and food packaging in any quantity. Note 1: Concentrated strong alkalis are incompatible with concentrated strong acids. Note 2: Concentrated strong acids are incompatible with concentrated strong alkalis. Note 3: Acids are incompatible with Dangerous Goods of Class 6 which are cyanides. Exemptions may apply.

MARINE TRANSPORT

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea. This material is classified as a Marine Pollutant (P) according to the International Maritime Dangerous Goods Code.



UN No: 1760
Dangerous Goods Class: 8
Packing Group: III
Proper Shipping Name: CORROSIVE LIQUID, N.O.S.

AIR TRANSPORT

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



UN No: 1760
Dangerous Goods Class: 8
Packing Group: III
Proper Shipping Name: CORROSIVE LIQUID, N.O.S.

15. REGULATORY INFORMATION (KEEP-KLEEN)

This material is not subject to the following international agreements:

- Montreal Protocol (Ozone depleting substances)
- The Stockholm Convention (Persistent Organic Pollutants)
- The Rotterdam Convention (Prior Informed Consent)

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International Convention for the

Prevention of Pollution from Ships (MARPOL)

This material is subject to the following international agreements:

Basel Convention (Hazardous Waste) - Wastes from the production, formulation and use of biocides and phytopharmaceuticals.

All components of this product are listed on or exempt from the New Zealand Inventory of Chemical (NZIoC).

EPA Group Standard: HSR002491 - Additives, Process Chemicals and Raw Materials (Corrosive) Group Standard

HSNO Classifications: 6.1D (O & D), 8.2B, 8.3A, 9.1A

Approved handler	No
Location test certificate	No
Fire extinguishers	No
Signage	Yes
Emergency response	Yes
Hazardous atmosphere zone	No
Work-place only chemical	No

16. OTHER INFORMATION (KEEP-KLEEN)

Reason for issue: Revised

This information was prepared in good faith from the best information available at the time of issue. It is based on the present level of research and to this extent we believe it is accurate. However, no guarantee of accuracy is made or implied and since conditions of use are beyond our control, all information relevant to usage is offered without warranty. The manufacturer will not be held responsible for any unauthorised use of this information or for any modified or altered versions.

If you are an employer it is your duty to tell your employees, and any others that may be affected, of any hazards described in this sheet and of any precautions that should be taken.

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END OF SAFETY DATA SHEET.