

Safety Data Sheet

Issue No: GHS 1.2	Issue Date May 2020	Issued by ICA International Chemicals
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1. Identification

GHS product identifier:	Virukill® Disinfectant Aerosol Fogger
Other means of identification:	Didecyl dimethyl Ammonium Chloride (DDAC)
Recommended use:	Disinfectant.
Producer:	ICA International Chemicals (Pty) Ltd 28 Planken Street Plankenbrug Industrial STELLENBOSCH · 7600 · SOUTH AFRICA
Telephone No:	+27 21 886 9812
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2. Hazards Identification

GHS classification of	Flammable Gas – Category 1 (Gases Under Pressure – Liquefied Gas) Acute Toxicity (Oral/Dermal) Category 5 Inhalation – Category 3 Eye damage/irritation - Category 1 Skin Corrosion/Irritation Category 2
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Signal Word: **Danger**

Hazard Statements

- H222 Extremely flammable aerosol.
- H229 Pressurized container: may burst if heated.
- H303 May be harmful if swallowed.
- H313 May be harmful in contact with skin.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H331 Toxic if inhaled

Precautionary Statements

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P211 Do not spray on an open flame or other ignition source.
- P251 Do not pierce or burn, even after use.
- P260 Do not breathe spray/aerosol.
- P264 Wash hands and face thoroughly after handling.
- P280 Wear protective gloves, protective clothing, eye and face protection.
- P284 Wear respiratory protection.
- P301+P312 If SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P302+P312 IF ON SKIN: wash with plenty of water.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P311 Call a POISON CENTER/ doctor/if feeling unwell.
- P332+P313 If skin irritation occurs, consult a doctor/physician.
- P305+351+338 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 CENTRE or doctor/physician if in eyes.
- P362 +P364 Take off contaminated clothing and wash well before re-use.
- P403+P233 Store in a well-ventilated place.
- P405 Store locked up.
- P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C.
- P501 Dispose of contents/ container as hazardous waste.

3. Composition / Information on Ingredients

INGREDIENT(s)	CAS NO:	Proportion (%)
N,N-Didecyl-N,N-dimethyl ammonium chloride	7173-51-5	0.5-1
Ethanol	64-17-5	30 – 50 %
Blend of: n-butane (C ₄ H ₁₀), isobutane (C ₄ H ₁₀) and propane (C ₃ H ₈).	106-97-8 75-28-5 74-98-6	40 – 60 %
Ingredients not determined to be hazardous		Balance

3. FIRST AID MEASURES

Show this SAFETY DATA SHEET to a doctor.

INHALATION:	If experiencing respiratory symptoms (irritation, difficulty with breathing), remove person to fresh air and keep at rest in a position comfortable for breathing. Administer oxygen if breathing is difficult. Call for medical assistance.
EYES:	Rinse eyes IMMEDIATELY with clean water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing while holding eyelids apart. Immediately seek medical assistance.
SKIN:	For exposure to liquid, immediately warm frostbite area with warm water not to exceed 41°C. In case of massive exposure, remove contaminated clothing while showering with warm water. Obtain medical attention. Seek medical assistance if skin irritation occurs.
INGESTION:	Ingestion is considered unlikely. If accidentally swallowed obtain immediate medical attention. DO NOT induce vomiting. Rinse mouth thoroughly with water. Make every effort to prevent vomit from entering the lungs by careful placement of the patient. Get medical attention. Possible mucosal damage may contra-indicate the use of gastric lavage.
Advice to Doctor	Symptoms: Dizziness, Headache, Nausea, Frostbite, Vomiting, Discomfort Hazards: This material may be a cardiac sensitizer; avoid the use of epinephrine. Treatment: Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

4. FIRE FIGHTING MEASURES:

Suitable Extinguishing Media: Water spray, dry chemical, foam, carbon dioxide (CO₂).

LARGE FIRES: Apply water in large quantities (flooding). Keep unopened containers exposed to the fire cool with spraying water on it.

Specific hazards during firefighting: Flammable Gas. Vapours are heavier than air and may travel long distances to a point of ignition and flash back. Exposure to fire may cause containers to rupture.

Special protective equipment for fire fighters: Fire fighters should wear self-contained breathing apparatus and full protective clothing as need for protection from heat and airborne combustion products. Use water to cool equipment, surfaces and containers exposed to fire and excessive heat. For large fire the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure.

Further information: Allow the fire to burn under controlled conditions. Fire should not be extinguished unless flow of gas can be immediately stopped. Stop leaks if you can. do it without risk. Evacuate area. If a leak or spill has not ignited, use water spray to disperse the vapours and to protect personnel attempting to stop a leak. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Use water to cool equipment, surfaces and containers exposed to fire and excessive heat. For large fire the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure.

5. ACCIDENTAL RELEASE MEASURES:

SPILL OR LEAK

- Ventilate the area. Warn or evacuate occupants in surrounding and downwind areas if required due to flammability of the material.
- Emergency eye wash capability should be available in the vicinity of any potential splash exposure.
- Promptly remove contaminated clothing and wash before reuse.
- PREVENT spilled concentrated product from entering drains or sewer systems. Dike and bund area with sand or earth to prevent contamination of drains or sewers.
- Simplest method of disposal involves dilution to low concentrations in order to allow the biocide to degrade naturally (only if permitted by regulatory authorities). At levels below 10 parts per million (active), no detrimental effects on functioning waste treatment systems have been noted.
- CAUTION: When in contact with refrigerated/cryogenic liquids, many materials become brittle and are likely to break without warning. Allow liquid to evaporate from the surface. All equipment used when handling the product must be grounded. Do not direct water at spill or source of leak. Do not touch or walk through spilled material. If possible, turn leaking containers so that gas escapes rather than liquid. Isolate area until gas has dispersed. Prevent spreading of vapours through sewers, ventilation systems and confined areas. Use water spray to reduce vapours or divert vapour cloud drift. Avoid allowing water runoff to contact spilled material.
- Water Spill: Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Allow liquid to evaporate from the surface.

7. HANDLING AND STORAGE

HANDLING	Keep away from fire, sparks and heated surfaces. No smoking near areas where material is stored or handled. Use only with adequate ventilation. The product should only be stored and handled in areas with suitably safe electrical classification. Hydrocarbon liquids including this product can act as a non-conductive flammable liquid (or static accumulators), and may form ignitable vapour-air mixtures in storage tanks or other containers. Precautions to prevent static initiated fire or explosion during transfer, storage or handling should be taken, include but are not limited to ground and bond containers during product transfers. Grounding and bonding may not be adequate protection to prevent ignition or explosion of hydrocarbon liquids and vapours that are static accumulators.
STORAGE	Keep away from flame, sparks, excessive temperatures and open flame. Use approved containers suitable for this product, temperature and pressure. Keep containers closed and clearly labelled. Empty or partially full product containers or vessels may contain explosive vapours. Do not pressurize, cut, heat, weld or expose containers to sources of ignition. Store in a well-ventilated area. The storage area should comply with local and national legislation and standards. Incompatible with oxidizing agents.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

EXPOSURE LIMITS	Propane, Butane, Isobutane and propane 1 000 ppm DDAC AEL (Acceptable Exposure Level) 0.10 mg/kg/day
ENGINEERING CONTROLS:	Use only flameproof electrical equipment approved for use in classified areas. Facilities should be equipped with an eyewash facility and a safety shower.

PERSONAL PROTECTIVE EQUIPMENT:

EYES: Wear chemical safety glasses with side shield or face shield.
RESPIRATORY: Use positive pressure supplied air respirator or self-contained breathing apparatus if there is a potential for uncontrolled release, exposure levels are not known, in oxygen deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection
SKIN: Where contact with liquid may occur, wear apron and face shield. Flame resistant clothing is recommended in areas where material is stored or handled.
Hand Protection: Where contact with liquid may occur, wear suitable gloves made of plastic or rubber. If contact with forearms is likely, wear gauntlet style gloves

HYGIENE MEASURES

After each day's use, wash contaminated clothing and safety equipment.
 After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Colourless gas. Cold vapour cloud may be white but the lack of visible gas cloud does not indicate absence of gas. A colourless liquid when pressurized.
ODOUR: Characteristic slight banana odour
pH: ~ 8.4
FLASH POINT: <-60 °C Method: ASTM D 92
EVAPORATION RATE High
FLAMMABILITY (SOLID, GAS) Extremely Flammable
DECOMPOSITION TEMPERATURE Heating may cause a fire or explosion. Material does not decompose at ambient temperatures.
CONDUCTIVITY Hydrocarbon liquids without static dissipater additive may have conductivity below 1 picoSiemens per meter (pS/m). The highest electro-static ignition risks are associated with "ultra-low conductivities" below 5pS/m.
SPECIFIC GRAVITY / DENSITY: 0.8 (liquid)
COMPATABILITY: Not compatible with concentrated anionic compounds.
CORROSION (METALS): Not corrosive to metals
OXIDISING PROPERTIES: Not an oxidising substance.

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable under normal conditions.
CONDITIONS TO AVOID: Excessive heat and fire.
INCOMPATIBLE MATERIALS: Avoid strong oxidising and strong reducing agents as well as anionic detergents.
HAZARDOUS DECOMPOSITION PRODUCTS: The substance decomposes on burning producing toxic fumes of nitrogen oxides and chloride.

11. TOXICOLOGICAL INFORMATION

Eye contact Risk of serious damage to eyes. Exposure can lead to irritation/burning, eye pain, conjunctivitis, swelling of eye and swelling of eyelid.
Skin Contact Prolonged skin contact, especially with the concentrate, will cause severe irritation/burning, rash, itching, and blistering.
Inhalation Breathing in high concentrations of vapours or aerosols of this material may cause respiratory irritation/burning, irritation to mouth/throat/nose, coughing/choking, chest pain, disorientation, dizziness, shortness of breath.
Ingestion Ingestion may result in ulceration and burns to the mouth/throat/nose, vomiting/nausea/abdominal pain, dizziness, and headache.
Skin Sensitisation Product is not a skin sensitiser.
Chronic effects None expected with normal use and exposure, does not accumulate in body tissue, not carcinogenic or mutagenic.

ANIMAL ACUTE TOXICITY DATA (ETA)

Oral: LD ₅₀ (rat)	2000 - 5000 mg/kg
Dermal: LD ₅₀ (rabbit)	2000 - 5000 mg/kg
Inhalation: LC ₅₀ rat	2,04 mg/ℓ air

12. ECOLOGICAL INFORMATION: (Liquid Product)

ECOTOXICITY (LD₅₀):

Birds:	Not hazardous to birds
Aquatic Organisms:	Not hazardous to fish Not hazardous to aquatic invertebrates Not hazardous to algae
Bees:	Not toxic to bees
Birds:	Not hazardous to birds.

DO NOT EXPOSE HUMANS, ANIMALS AND PLANT MATERIAL TO THE AEROSOL, REMOVE ALL LIVING ANIMALS FROM TREATMENT AREA.

Bioaccumulation is not expected to be significant. This product is readily biodegradable. Low potential for bio-concentration.
 No long-term influence on nitrogen or carbon transformation in soils.

13. DISPOSAL CONSIDERATIONS:

On site disposal of the concentrated product is not acceptable. Ideally, the product should be used for its intended purpose. If there is a need to dispose of the product, approach local authorities.

14. TRANSPORT INFORMATION:

UN NUMBER: 1950
PROPER SHIPPING NAME: Aerosols, flammable (each not exceeding 1 l capacity)
CLASS 2.1
PACKING GROUP: Not assigned

15. REGULATORY INFORMATION:

Aerosol shall be provided with protection against accidental discharge
Registered with the Compulsory Specification for disinfectants and detergent-disinfectants as published by Government Notice No. R. 529 (Government Gazette No. 19999) of 14 May 1999, registration number ACT5GNR529/243642/O40/1200

16. OTHER INFORMATION

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This information concerns only the product conforming to its specifications and limits to the uses herein stated. This sheet complements the technical sheet of use but does not replace it. The information contained on this sheet is based on knowledge of the product on date of publication. It is given in good faith.

The data does not signify any warranty with regard to the product properties. This Safety Data Sheet (SDS) summarises to our best knowledge the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this SDS and consider the information in the context of how to prevent accidents in the normal workplace including in conjunction with other products.

Care for the environment is essential for our future.

END of SDS