

Issue Date: 02/07/2021
Last Revision Date: 17/08/2023
Superseded Date: 02/07/2021
Version Number: 02

SAFETY DATA SHEET

Product Code: KVHBZ05T

PAGE 1 OF 15

SECTION 1 PRODUCT IDENTIFICATION

Product Name: KOVIT Hospital Grade BKCL Disinfectant Cleanser
Chemical Name: Not Applicable
Synonyms: Not Applicable
Chemical Formula: Not Applicable
Other Means of Identification: Not Applicable

Relevant identified uses of the substance or mixture and uses advised against

Relevant Identified Uses: Disinfectant Cleaner.
Use according to manufacturer's directions.

SECTION 2 HAZARD IDENTIFICATION

Classification of the Substance or Mixture

NON-HAZARDOUS CHEMICAL. NON-DANGEROUS GOODS. According to the WHS Regulations and the ADG Code.

Poisons Schedule: Not Applicable
Classification ^[1] Not Applicable

Label elements

Hazard Pictogram(s): Not Applicable
Signal Word: Not Applicable

Hazard Statement(s): Not Applicable

Precautionary Statement(s)

Prevention: Not Applicable
Response: Not Applicable
Storage: Not Applicable
Disposal: Not Applicable

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Substances: See section below for composition of Mixtures

Issue Date: 02/07/2021
Last Revision Date: 17/08/2023
Superseded Date: 02/07/2021
Version Number: 02

SAFETY DATA SHEET

Product Code: KVHBZ05T

PAGE 2 OF 15

Mixtures:

CAS No	%[weight]	Name
64366-70-7	1-3	2-Ethylhexanol, Ethoxylated, Propoxylated
67-63-0	1-3	Isopropanol
63449-41-2	0.35	Benzalkonium Chloride
7173-51-5	0.30	Didecyltrimethylammonium Chloride
Not Available	Balance	Ingredients determined not to be hazardous
Not Available		Includes
7732-18-5	>60	Water

SECTION 4 FIRST AID MEASURES

Description of First Aid Measures

Eye Contact:

If this product comes in contact with the eyes:
Wash out immediately with fresh running water.
Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
Seek medical attention without delay; if pain persists or recurs seek medical attention.
Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Skin Contact:

If skin contact occurs:
Immediately remove all contaminated clothing, including footwear.
Flush skin and hair with running water (and soap if available).
Seek medical attention in event of irritation.

Inhalation:

If fumes, aerosols or combustion products are inhaled remove from contaminated area.
Other measures are usually unnecessary.

Ingestion:

If swallowed do NOT induce vomiting.
If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
Observe the patient carefully.
Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
Seek medical advice.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

Issue Date: 02/07/2021
Last Revision Date: 17/08/2023
Superseded Date: 02/07/2021
Version Number: 02

SAFETY DATA SHEET

Product Code: KVHBZ05T**PAGE 3 OF 15****SECTION 5****FIRE FIGHTING MEASURES****Extinguishing Media**

The product contains a substantial proportion of water, therefore there are no restrictions on the type of extinguishing media which may be used. Choice of extinguishing media should take into account surrounding areas.

Though the material is non-combustible, evaporation of water from the mixture, caused by the heat of nearby fire, may produce floating layers of combustible substances.

In such an event consider:

- Foam
- Dry chemical powder
- Carbon Dioxide

Special hazards arising from the substrate or mixture

Fire Incompatibility: None known.

Advice for Firefighters**Fire Fighting:**

Alert Fire Brigade and tell them location and nature of hazard.
Wear breathing apparatus plus protective gloves in the event of a fire.
Prevent, by any means available, spillage from entering drains or water courses.
Use fire fighting procedures suitable for surrounding area.
DO NOT approach containers suspected to be hot.
Cool fire exposed containers with water spray from a protected location.
If safe to do so, remove containers from path of fire.
Equipment should be thoroughly decontaminated after use.

Fire/Explosion Hazard:

The material is not readily combustible under normal conditions.
However, it will break down under fire conditions and the organic component may burn.
Not considered to be a significant fire risk.
Heat may cause expansion or decomposition with violent rupture of containers.
Decomposes on heating and may produce toxic fumes of Carbon Monoxide (CO).
May emit acrid smoke.

Decomposes on heating and produces toxic fumes of:
Carbon Dioxide (CO₂)
Other pyrolysis products typical of burning organic material.
May emit poisonous fumes.
May emit corrosive fumes.

HAZCHEM: Not Applicable

SECTION 6**ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures**

See section 8

Environmental precautions

See section 12

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Issue Date: 02/07/2021
Last Revision Date: 17/08/2023
Superseded Date: 02/07/2021
Version Number: 02

SAFETY DATA SHEET

Product Code: KVHBZ05T**PAGE 4 OF 15**

Methods and material for containment and cleaning up

Minor Spills:

Clean up all spills immediately.
Avoid breathing vapours and contact with skin and eyes.
Control personal contact with the substance, by using protective equipment.
Contain and absorb spill with sand, earth, inert material or vermiculite.
Wipe up.
Place in a suitable, labelled container for waste disposal.

Major Spills:

Moderate hazard.
Clear area of personnel and move upwind.
Alert Fire Brigade and tell them location and nature of hazard.
Wear breathing apparatus plus protective gloves.
Prevent, by any means available, spillage from entering drains or water course.
Stop leak if safe to do so.
Contain spill with sand, earth or vermiculite.
Collect recoverable product into labelled containers for recycling.
Neutralise/decontaminate residue (see Section 13 for specific agent).
Collect solid residues and seal in labelled drums for disposal.
Wash area and prevent runoff into drains.
After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.
If contamination of drains or waterways occurs, advise emergency services.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7

HANDLING AND STORAGE

Precautions for Safe Handling

Safe Handling:

DO NOT allow clothing wet with material to stay in contact with skin.
Avoid all personal contact, including inhalation.
Wear protective clothing when risk of exposure occurs.
Use in a well-ventilated area.
Prevent concentration in hollows and sumps.
DO NOT enter confined spaces until atmosphere has been checked.
DO NOT allow material to contact humans, exposed food or food utensils.
Avoid contact with incompatible materials.
When handling, DO NOT eat, drink or smoke.
Keep containers securely sealed when not in use.
Avoid physical damage to containers.
Always wash hands with soap and water after handling.
Work clothes should be laundered separately. Launder contaminated clothing before re-use.
Use good occupational work practice.
Observe manufacturer's storage and handling recommendations contained within this SDS.
Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.

Other Information:

Store in original containers.
Keep containers securely sealed.
No smoking, naked lights or ignition sources.
Store in a cool, dry, well-ventilated area.
Store away from incompatible materials and foodstuff containers.
Protect containers against physical damage and check regularly for leaks.
Observe manufacturer's storage and handling recommendations contained within this SDS.

Issue Date: 02/07/2021
Last Revision Date: 17/08/2023
Superseded Date: 02/07/2021
Version Number: 02

SAFETY DATA SHEET

Product Code: KVHBZ05T

PAGE 5 OF 15

Conditions for safe storage, including any incompatibilities

Suitable Container:

Polyethylene or polypropylene container.
Packing as recommended by manufacturer.
Check all containers are clearly labelled and free from leaks.

Storage Incompatibility:

Avoid reaction with oxidising agents, bases and strong reducing agents.
Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.



+

X

+

O

+

+

+

X — Must not be stored together

O — May be stored together with specific preventions

— May be stored together

SECTION 8

EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material Name	TWA	STEL	Peak	Notes
Australia Exposure Standards	Isopropanol	Isopropyl Alcohol	400ppm / 983mg/m ³	1230mg/m ³ / 500ppm	Not Available	Not Available

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
Isopropanol	400 ppm	2000* ppm	12000** ppm

Ingredient	Original IDLH	Revised IDLH
2-Ethylhexanol, Ethoxylated, Propoxylated	Not Available	Not Available
Isopropanol	2,000 ppm	Not Available
Benzalkonium Chloride	Not Available	Not Available
Water	Not Available	Not Available

Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
2-Ethylhexanol, Ethoxylated, Propoxylated	E	≤ 0.1 ppm
Benzalkonium Chloride	E	≤ 0.01 mg/m ³

Notes:

Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.

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Issue Date: 02/07/2021
Last Revision Date: 17/08/2023
Superseded Date: 02/07/2021
Version Number: 02

SAFETY DATA SHEET

Product Code: KVHBZ05T

PAGE 6 OF 15

Exposure Controls

Appropriate Engineering Controls:

General exhaust is adequate under normal operating conditions.

Personal Protection:



PPE GLOVES



PPE GOGGLES



PPE MASK



PPE SUIT

Eye and Face Protection

Safety glasses with side shields.

Chemical goggles.

Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience.

Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

Skin Protection:

See Hand protection below

Hands/Feet Protection:

Wear chemical protective gloves, e.g. PVC.

Wear safety footwear or safety gumboots, e.g. Rubber

The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.

Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include:

- Frequency and duration of contact,
- Chemical resistance of glove material,
- Glove thickness and
- Dexterity

Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739, AS/NZS 2161.1 or national equivalent).

- When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
- When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374, AS/NZS 2161.10.1 or national equivalent) is recommended.
- Some glove polymer types are less affected by movement and this should be taken into account when considering gloves for long-term use.
- Contaminated gloves should be replaced.

Issue Date: 02/07/2021
Last Revision Date: 17/08/2023
Superseded Date: 02/07/2021
Version Number: 02

SAFETY DATA SHEET

Product Code: KVHBZ05T

PAGE 7 OF 15

As defined in ASTM F-739-96 in any application, gloves are rated as:

- Excellent when breakthrough time > 480 min
- Good when breakthrough time > 20 min
- Fair when breakthrough time < 20 min
- Poor when glove material degrades

For general applications, gloves with a thickness typically greater than 0.35 mm, are recommended. It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.

Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers' technical data should always be taken into account to ensure selection of the most appropriate glove for the task.

Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:

- Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.
- Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential

Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

See Other protection below

Body Protection:

Other Protection:

Overalls.
P.V.C apron.
Barrier cream.
Skin cleansing cream.
Eye wash unit.

Respiratory Protection:

Type A Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.

Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	Air-line*	A-2	A-PAPR-2 ^
up to 20 x ES	-	A-3	-
20+ x ES	-	Air-line**	-

* - Continuous-flow; ** - Continuous-flow or positive pressure demand

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO₂), G = Agricultural chemicals, K = Ammonia(NH₃), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content. The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted.

Because of these limitations, only restricted use of cartridge respirators is considered appropriate.

Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

Issue Date: 02/07/2021
 Last Revision Date: 17/08/2023
 Superseded Date: 02/07/2021
 Version Number: 02

SAFETY DATA SHEET

Product Code: KVHBZ05T

PAGE 8 OF 15

SECTION 9 PHYSICAL/CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance:	Clear liquid; mixes with water.		
Physical State:	Liquid	Relative Density (Agua= 1):	Not Available
Odour:	Not Available	Partition Coefficient N-Octanol/Water:	Not Available
Odour Threshold:	Not Available	Auto-Ignition Temperature (°C):	Not Available
pH (as supplied)	Not Available	Decomposition Temperature:	Not Available
Melting Point/Freezing Point (°C):	Not Available	Viscosity (cSt):	Not Available
Initial Boiling Point and Boiling Range (°C):	Not Available	Molecular Weight (g/mol):	Not Available
Flash Point (°C):	Not Available	Taste:	Not Available
Evaporation Rate:	Not Available	Explosive Properties:	Not Available
Flammability:	Not Available	Oxidising Properties:	Not Available
Upper Explosive Limit (%):	Not Available	Surface Tension (dyn/cm or mN/m):	Not Available
Lower Explosive Limit (%):	Not Available	Volatile Component (%vol):	Not Available
Vapour Pressure (kPa):	Not Available	Gas Group:	Not Available
Solubility in Water:	Miscible	pH as a Solution (1%):	Not Available
Vapour Density (Air = 1):	Not Available	VOC g/L:	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.
Possibility of Hazardous Reactions	See section 7
Conditions to Avoid:	See section 7
Incompatible Materials:	See section 7
Hazardous decomposition Products:	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Inhaled:	The material is not thought to produce either adverse health effects or irritation of the respiratory tract following inhalation (as classified by EC Directives using animal models). Nevertheless, adverse systemic effects have been produced following exposure of animals by at least one other route and good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting. Not normally a hazard due to non-volatile nature of product
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Issue Date: 02/07/2021
Last Revision Date: 17/08/2023
Superseded Date: 02/07/2021
Version Number: 02

SAFETY DATA SHEET

Product Code: KVHBZ05T

PAGE 9 OF 15

Ingestion	Accidental ingestion of the material may be damaging to the health of the individual.										
Skin Contact	There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons. Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.										
Eye	There is some evidence to suggest that this material can cause eye irritation and damage in some persons.										
Chronic	Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.										
Ki-San:	<table> <tr> <th>TOXICITY</th><th>IRRITATION</th></tr> <tr> <td>Not Available</td><td>Not Available</td></tr> </table>	TOXICITY	IRRITATION	Not Available	Not Available						
TOXICITY	IRRITATION										
Not Available	Not Available										
2-Ethylhexanol, Ethoxylated, Propoxylated:	<table> <tr> <th>TOXICITY</th><th>IRRITATION</th></tr> <tr> <td>Dermal (rat) LD50: >2000 mg/kg^[2]</td><td>Not Available</td></tr> <tr> <td>Oral(Rat) LD50: >2000 mg/kg^[2]</td><td></td></tr> </table>	TOXICITY	IRRITATION	Dermal (rat) LD50: >2000 mg/kg ^[2]	Not Available	Oral(Rat) LD50: >2000 mg/kg ^[2]					
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Isopropanol:	<table> <tr> <th>TOXICITY</th><th>IRRITATION</th></tr> <tr> <td>Dermal (rabbit) LD50: 21.026 mg/kg^[1]</td><td>Eye (rabbit): 10 mg - moderate</td></tr> <tr> <td>Inhalation(Mouse) LC50: 27.2 mg/l4h^[2]</td><td>Eye (rabbit): 100 mg - SEVERE</td></tr> <tr> <td>Oral(Rabbit) LD50: 667 mg/kg^[2]</td><td>Eye (rabbit): 100mg/24hr-moderate</td></tr> <tr> <td></td><td>Skin (rabbit): 500 mg - mild</td></tr> </table>	TOXICITY	IRRITATION	Dermal (rabbit) LD50: 21.026 mg/kg ^[1]	Eye (rabbit): 10 mg - moderate	Inhalation(Mouse) LC50: 27.2 mg/l4h ^[2]	Eye (rabbit): 100 mg - SEVERE	Oral(Rabbit) LD50: 667 mg/kg ^[2]	Eye (rabbit): 100mg/24hr-moderate		Skin (rabbit): 500 mg - mild
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Benzalkonium Chloride:	<table> <tr> <th>TOXICITY</th><th>IRRITATION</th></tr> <tr> <td>Dermal (rabbit) LD50: 3.708 mg/kg^[1]</td><td>Eye: adverse effect observed (irreversible damage)^[1]</td></tr> <tr> <td>Inhalation(Rat) LC50: 0.22 mg/l4h^[1]</td><td>Skin: adverse effect observed (corrosive)^[1]</td></tr> <tr> <td>Oral(Rat) LD50: 795 mg/kg^[1]</td><td></td></tr> </table>	TOXICITY	IRRITATION	Dermal (rabbit) LD50: 3.708 mg/kg ^[1]	Eye: adverse effect observed (irreversible damage) ^[1]	Inhalation(Rat) LC50: 0.22 mg/l4h ^[1]	Skin: adverse effect observed (corrosive) ^[1]	Oral(Rat) LD50: 795 mg/kg ^[1]			
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Water	<table> <tr> <th>TOXICITY</th><th>IRRITATION</th></tr> <tr> <td>Oral(Rat) LD50: >90 mg/kg^[2]</td><td>Not Available</td></tr> </table>	TOXICITY	IRRITATION	Oral(Rat) LD50: >90 mg/kg ^[2]	Not Available						
TOXICITY	IRRITATION										
Oral(Rat) LD50: >90 mg/kg ^[2]	Not Available										
Legend:	1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. * Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances										
2-ETHYLHEXANOL, ETHOXYLATED, PROPOXYLATED:	Humans have regular contact with alcohol ethoxylates through a variety of industrial and consumer products such as soaps, detergents and other cleaning products. Exposure to these chemicals can occur through swallowing, inhalation, or contact with The skin or eyes. Studies of acute toxicity show that relatively high volumes would have to occur to produce any toxic response. No death due to poisoning with alcohol ethoxylates has ever been reported. Studies show that alcohol ethoxylates have low toxicity through swallowing and skin contact. Animal studies show these chemicals may produce gastrointestinal irritation, stomach ulcers, hair standing up, diarrhea and lethargy. Slight to severe irritation occurred when undiluted alcohol ethoxylates were applied to the skin and eyes of animals. These chemicals show no indication of genetic toxicity or potential to cause mutations and cancers. Toxicity is thought to be substantially lower than that of nonylphenol ethoxylates. Some of the oxidation products of this group of substances may have sensitizing properties.										

Issue Date: 02/07/2021
Last Revision Date: 17/08/2023
Superseded Date: 02/07/2021
Version Number: 02

SAFETY DATA SHEET

Product Code: KVHBZ05T

PAGE 10 OF 15

As they cause less irritation, nonionic surfactants are often preferred to ionic surfactants in topical products. However, their tendency to auto-oxidise also increases their irritation. Due to their irritating effect it is difficult to diagnose allergic contact dermatitis (ACD) by patch testing. Both laboratory and animal testing has shown that there is no evidence for alcohol ethoxylates (AEs) causing genetic damage, mutations or cancer. No adverse reproductive or developmental effects were observed.

* Typical values - Dow Chemical SDS Non-mutagenic for bacteria and/or yeast. (Akzo Nobel)

ISOPROPANOL:

Isopropanol is irritating to the eyes, nose and throat but generally not to the skin. Prolonged high dose exposure may also produce depression of the central nervous system and drowsiness. Few have reported skin irritation. It can be absorbed from the skin or when inhaled. Intentional swallowing is common particularly among alcoholics or suicide victims and also leads to fainting, breathing difficulty, nausea, vomiting and headache. In the absence of unconsciousness, recovery usually occurred. Repeated doses may damage the kidneys. A decrease in the frequency of mating has been found in among animals, and newborns have been found to have a greater incidence of low birth weight. Tumours of the testes have been observed in the male rat. The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. The substance is classified by IARC as Group 3: NOT classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing.

Benzalkonium Chloride:

For acid mists, aerosols, vapours
Test results suggest that eukaryotic cells are susceptible to genetic damage when the pH falls to about 6.5. Cells from the respiratory tract have not been examined in this respect. Mucous secretion may protect the cells of the airway from direct exposure to inhaled acidic mists (which also protects the stomach lining from the hydrochloric acid secreted there). The material may cause severe skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Repeated exposures may produce severe ulceration. Alkyldimethylbenzylammonium chlorides are in the list of dangerous substances of council directive, classified as "harmful in contact with skin and on ingestion", and "corrosive and very toxic to aquatic organisms". It can cause dose dependent skin and eye irritation with possible deterioration of vision, possible sensitisation in those with pre-existing eczema. It does not cause cancer, genetic defect, foetal or developmental abnormality. For similar compound benzyl C12-18 alkyldimethyl ammonium chloride CAS RN 68391-01-5: No significant acute toxicological data identified in literature search.

Ki-San & WATER:**ISOPROPANOL &
BENZALKONIUM
CHLORIDE:**

Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a nonallergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. On the other hand, industrial bronchitis is a disorder that occurs as a result of exposure due to high concentrations of irritating substance (often particles) and is completely reversible after exposure ceases. The disorder is characterized by difficulty breathing, cough and mucus production.

Issue Date: 02/07/2021
Last Revision Date: 17/08/2023
Superseded Date: 02/07/2021
Version Number: 02

SAFETY DATA SHEET

Product Code: KVHBZ05T

PAGE 11 OF 15

Acute Toxicity
Skin Irritation/Corrosion
Serious Eye Damage/Irritation
Respiratory or Skin Sensitisation
Mutagenicity

Carcinogenicity
Reproductivity
STOT - Single Exposure
STOT - Repeated Exposure
Aspiration Hazard

Legend: - Data either not available or does not fill the criteria for classification
- Data available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Ki-San:

Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

2-Ethylhexanol, Ethoxylated, Propoxylated:

Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

Isopropanol:

Endpoint	Test Duration (hr)	Species	Value	Source
LC50	96	Fish	4200mg/l	4
EC50(ECx)	24	Algae or other aquatic plants	0.011mg/L	4
EC50	48	Crustacea	7550mg/l	4
EC50	72	Algae or other aquatic plants	>1000mg/l	1
EC50	96	Algae or other aquatic plants	>1000mg/l	1

Benzalkonium Chloride:

Endpoint	Test Duration (hr)	Species	Value	Source
EC10(ECx)	96	Algae or other aquatic plants	0.002mg/l	2
EC50	48	Crustacea	0.016mg/l	2
LC50	96	Fish	0.28mg/l	2
EC50	72	Algae or other aquatic plants	0.26mg/l	2
EC50	96	Algae or other aquatic plants	0.01mg/l	2

Water:

Endpoint	Test Duration (hr)	Species	Value	Source
Not Available	Not Available	Not Available	Not Available	Not Available

Legend:

Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

Persistence and Degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
Isopropanol	LOW (Half-life = 14 days)	LOW (Half-life = 3 days)
Water	LOW	LOW

Bioaccumulative Potential

Ingredient	Bioaccumulation
Isopropanol	LOW (LogKOW = 0.05)
Water	LOW (LogKOW = -1.38)

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Issue Date: 02/07/2021
Last Revision Date: 17/08/2023
Superseded Date: 02/07/2021
Version Number: 02

SAFETY DATA SHEET

Product Code: KVHBZ05T

PAGE 12 OF 15

Mobility in Soil

Ingredient	Mobility
Isopropanol	HIGH (KOC = 1.06)
Water	LOW (KOC = 14.3)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Product/Packaging Disposal:

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction
- Reuse
- Recycling
- Disposal (if all else fails)

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.

DO NOT allow wash water from cleaning or process equipment to enter drains.

It may be necessary to collect all wash water for treatment before disposal.

In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.

Where in doubt contact the responsible authority.

Recycle wherever possible.

Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.

Dispose of by: burial in a land-fill specifically licensed to accept chemical and / or pharmaceutical wastes or incineration in a licensed apparatus (after admixture with suitable combustible material).

Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

SECTION 14 TRANSPORT INFORMATION

Labels Required

Marine Pollutant:

NO

HAZCHEM:

Not Applicable

Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

Issue Date: 02/07/2021
Last Revision Date: 17/08/2023
Superseded Date: 02/07/2021
Version Number: 02

SAFETY DATA SHEET

Product Code: KVHBZ05T

PAGE 13 OF 15

Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product Name	Group
2-Ethylhexanol, Ethoxylated, Propoxylated	Not Available
Isopropanol	Not Available
Benzalkonium Chloride	Not Available
Water	Not Available

Transport in bulk in accordance with the ICG Code

Product Name	Ship Type
2-Ethylhexanol, Ethoxylated, Propoxylated	Not Available
Isopropanol	Not Available
Benzalkonium Chloride	Not Available
Water	Not Available

SECTION 15 REGULATORY INFORMATION

Safety, health and environmental regulations / legislation specific for the substance or mixture

2-ethylhexanol, ethoxylated, propoxylated is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

Isopropanol is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australian Inventory of Industrial Chemicals (AIIC)

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

Benzalkonium Chloride is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 6

Australian Inventory of Industrial Chemicals (AIIC)

Water is found on the following regulatory lists

Australian Inventory of Industrial Chemicals (AIIC)

Issue Date: 02/07/2021
Last Revision Date: 17/08/2023
Superseded Date: 02/07/2021
Version Number: 02

SAFETY DATA SHEET

Product Code: KVHBZ05T

PAGE 14 OF 15

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (2-ethylhexanol, ethoxylated, propoxylated; isopropanol; benzalkonium chloride; water)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	No (2-ethylhexanol, ethoxylated, propoxylated)
Japan - ENCS	No (2-ethylhexanol, ethoxylated, propoxylated; benzalkonium chloride)
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	No (2-ethylhexanol, ethoxylated, propoxylated)
USA - TSCA	No (benzalkonium chloride)
Taiwan - TCSI	Yes
Mexico - INSQ	No (2-ethylhexanol, ethoxylated, propoxylated; benzalkonium chloride)
Vietnam - NCI	Yes
Russia - FBEPH	No (2-ethylhexanol, ethoxylated, propoxylated; benzalkonium chloride)
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory and are not exempt from listing (see specific ingredients in brackets)

SECTION 16 OTHER INFORMATION

PC - TWA: Permissible Concentration-Time Weighted Average
PC - STEL: Permissible Concentration-Short Term Exposure Limit
IARC: International Agency for Research on Cancer
ACGIH: American Conference of Governmental Industrial Hygienists
STEL: Short Term Exposure Limit
TEEL: Temporary Emergency Exposure Limit
IDLH: Immediately Dangerous to Life or Health Concentrations
ES: Exposure Standard
OSF: Odour Safety Factor
NOAEL :No Observed Adverse Effect Level
LOAEL: Lowest Observed Adverse Effect Level
TLV: Threshold Limit Value
LOD: Limit Of Detection

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Issue Date: 02/07/2021
Last Revision Date: 17/08/2023
Superseded Date: 02/07/2021
Version Number: 02

SAFETY DATA SHEET

Product Code: KVHBZ05T**PAGE 15 OF 15**

OTV: Odour Threshold Value
BCF: BioConcentration Factors
BEI: Biological Exposure Index
AIIIC: Australian Inventory of Industrial Chemicals
DSL: Domestic Substances List
NDSL: Non-Domestic Substances List
IECSC: Inventory of Existing Chemical Substance in China
EINECS: European INventory of Existing Commercial chemical Substances
ELINCS: European List of Notified Chemical Substances
NLP: No-Longer Polymers
ENCS: Existing and New Chemical Substances Inventory
KECI: Korea Existing Chemicals Inventory
NZIoC: New Zealand Inventory of Chemicals
PICCS: Philippine Inventory of Chemicals and Chemical Substances
TSCA: Toxic Substances Control Act
TCSI: Taiwan Chemical Substance Inventory
INSQ: Inventario Nacional de Sustancias Químicas
NCI: National Chemical Inventory
FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

Reason for Revision: To bring to date

END OF SDS