

GECA Liquid Hand Wash Antibacterial

dimethyldialkylammonium chloride/ acrylamide polymer	TOXICITY	IRRITATION
	Not Available	Not Available
glycerol	TOXICITY	IRRITATION
	Oral (rat) LD50: 12600 mg/kg ^[2]	Not Available
2-(morpholinothio)benzothiazole	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >7940 mg/kg* ^[2]	Eye (rabbit): (FHSA) 5.0/110.0 *
	Oral (rat) LD50: >8200 mg/kg** ^[2]	Eye (rabbit): 100 mg/24h-moderate
		non-irritating
		Skin (rabbit): (FHSA) 0.0/8.0 *
		slight irritation
lauryl hydroxysultaine	TOXICITY	IRRITATION
	Not Available	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

AMMONIUM LAURYL ETHER SULFATE	Alcohol ethoxysulfates (AES) are of low acute toxicity. Neat AES are irritant to the skin and eyes. The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
DIMETHYLDIALKYLAMMONIUM CHLORIDE/ ACRYLAMIDE POLYMER	Most undiluted cationic surfactants satisfy the criteria for classification as Harmful (Xn) with R22 and as Irritant (Xi) for skin and eyes with R38 and R41.
GLYCEROL	Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic 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. At very high concentrations, evidence predicts that glycerol may cause tremor, irritation of the skin, eyes, digestive tract and airway. Otherwise it is of low toxicity. There is no significant evidence to suggest that it causes cancer, genetic, reproductive or developmental toxicity.
2-(MORPHOLINOTHIO)BENZOTHIAZOLE	The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. The significance of the contact allergen is not simply determined by its sensitisation potential: the distribution of the substance and the opportunities for contact with it are equally important. A weakly sensitising substance which is widely distributed can be a more important allergen than one with stronger sensitising potential with which few individuals come into contact. From a clinical point of view, substances are noteworthy if they produce an allergic test reaction in more than 1% of the persons tested. The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. Skin and eye irritation effects may be mild. Allergic skin reaction is possible in susceptible persons. There is a low concern for mutations. It is a potent skin sensitiser and similar reactions with other rubber chemicals can occur. Following oral administration, the central nervous system, lung, liver, kidney, stomach and intestines may be affected. There was no conclusive evidence of effects on reproduction although 2-mercaptobenzothiazole (MBT) may have some potential to cause cancer. Members of this category pose a low concern for acute toxicity. Exposure is likely from skin contact with rubber or latex articles. Skin irritation, or possibly an allergic skin reaction may occur, but only in sensitive individuals subjected to prolonged and repeated exposure, especially under moist conditions. for morpholine: There have been no reports on incidents of acute poisoning or on the effects of short- or long-term exposure to morpholine by the general population. The phenomenon known as blue vision or glaucopsia, as well as some instances of skin and respiratory tract irritation, have been described in reports of occupational exposure to morpholine; however, no atmospheric concentrations of morpholine were given. It was reported that the number of chromosomal aberrations in the lymphocytes of peripheral blood of workers exposed for 3-10 years to morpholine at concentrations of 0.54-0.93 mg/m ³ did not differ significantly from controls. Undiluted morpholine is strongly irritant to skin; a dilute solution (1 to 40) was mildly irritant. The potential carcinogenicity of morpholine in exposed human populations has not been investigated. Morpholine is absorbed after oral, dermal and inhalation exposure. In the rat following oral and intravenous administration, morpholine is rapidly distributed, the highest concentrations being found in the intestine and muscle. In the rabbit, following intravenous and inhalation exposure, morpholine is preferentially distributed to the kidneys, lower concentrations reaching the lung, liver and blood. Specific developmental abnormalities (musculoskeletal system) recorded.
LAURYL HYDROXYSULTAINE	Amphoteric surfactants are easily absorbed in the gut and partly excreted unchanged in the faeces. It has not been shown to accumulate in the body. Concentrated betaines are expected to irritate the skin and eyes, but dilute solutions only irritate the eyes. No evidence of delayed contact hypersensitivity was found in animal testing. Tests for mutation-causing potential have proved negative.
DIMETHYLDIALKYLAMMONIUM CHLORIDE/ ACRYLAMIDE POLYMER & LAURYL HYDROXYSULTAINE	No significant acute toxicological data identified in literature search.

Acute Toxicity Carcinogenicity

Continued...

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Skin Irritation/Corrosion	☉	Reproductivity	☉
Serious Eye Damage/Irritation	☉	STOT - Single Exposure	☉
Respiratory or Skin sensitisation	☉	STOT - Repeated Exposure	☉
Mutagenicity	☉	Aspiration Hazard	☉

Legend: ✘ – Data available but does not fill the criteria for classification
✔ – Data available to make classification
☉ – Data Not Available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Ingredient	ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
GECA Liquid Hand Wash Antibacterial	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
ammonium lauryl ether sulfate	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
dimethyldialkylammonium chloride/ acrylamide polymer	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
glycerol	LC50	96	Fish	>11mg/L	2
	EC50	96	Algae or other aquatic plants	77712.039mg/L	3
	EC0	24	Crustacea	>500mg/L	1
2-(morpholiniothio)benzothiazole	LC50	96	Fish	0.31mg/L	2
	EC50	48	Crustacea	=4mg/L	1
	EC50	96	Algae or other aquatic plants	923.219mg/L	3
	EC50	48	Crustacea	=4.5mg/L	1
	NOEC	2136	Fish	0.041mg/L	2
lauryl hydroxysultaine	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

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
glycerol	LOW	LOW
2-(morpholiniothio)benzothiazole	HIGH	HIGH

Bioaccumulative potential

Ingredient	Bioaccumulation
glycerol	LOW (LogKOW = -1.76)
2-(morpholiniothio)benzothiazole	LOW (LogKOW = 1.0246)

Mobility in soil

Ingredient	Mobility
glycerol	HIGH (KOC = 1)
2-(morpholiniothio)benzothiazole	LOW (KOC = 2088)

SECTION 13 DISPOSAL CONSIDERATIONS

GECA Liquid Hand Wash Antibacterial

Waste treatment methods

Product / Packaging disposal	<ul style="list-style-type: none"> ▶ Containers may still present a chemical hazard/ danger when empty. ▶ Return to supplier for reuse/ recycling if possible. <p>Otherwise:</p> <ul style="list-style-type: none"> ▶ If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill. ▶ Where possible retain label warnings and SDS and observe all notices pertaining to the product. <p>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.</p> <p>A Hierarchy of Controls seems to be common - the user should investigate:</p> <ul style="list-style-type: none"> ▶ Reduction ▶ Reuse ▶ Recycling ▶ Disposal (if all else fails) <p>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.</p> <ul style="list-style-type: none"> ▶ 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.
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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

SECTION 15 REGULATORY INFORMATION

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

AMMONIUM LAURYL ETHER SULFATE(32612-48-9) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

DIMETHYLDIALKYLAMMONIUM CHLORIDE/ ACRYLAMIDE POLYMER(26590-05-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Inventory of Chemical Substances (AICS)

GLYCEROL(56-81-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Inventory of Chemical Substances (AICS)

2-(MORPHOLINOTHIO)BENZOTHAZOLE(102-77-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Substances Information System - Consolidated Lists

Australia Inventory of Chemical Substances (AICS)

LAURYL HYDROXSULTAINE(13197-76-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Hazardous Substances Information System - Consolidated Lists

National Inventory	Status
Australia - AICS	N (lauryl hydroxysultaine)
Canada - DSL	Y
Canada - NDSL	N (dimethyldialkylammonium chloride/ acrylamide polymer; glycerol; lauryl hydroxysultaine; 2-(morpholinothio)benzothiazole; ammonium lauryl ether sulfate)
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	N (dimethyldialkylammonium chloride/ acrylamide polymer)
Japan - ENCS	N (dimethyldialkylammonium chloride/ acrylamide polymer; glycerol; lauryl hydroxysultaine; 2-(morpholinothio)benzothiazole; ammonium lauryl ether sulfate)
Korea - KECI	N (lauryl hydroxysultaine)
New Zealand - NZIoC	Y
Philippines - PICCS	N (lauryl hydroxysultaine)
USA - TSCA	Y

Continued...

GECA Liquid Hand Wash Antibacterial**Legend:**

Y = All ingredients are on the inventory

N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

SECTION 16 OTHER INFORMATION**Other information****Ingredients with multiple cas numbers**

Name	CAS No
ammonium lauryl ether sulfate	32612-48-9, 67762-19-0
dimethyldialkylammonium chloride/ acrylamide polymer	26590-05-6, 108464-53-5
glycerol	56-81-5, 29796-42-7, 30049-52-6, 37228-54-9, 75398-78-6, 78630-16-7, 8013-25-0

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations

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

OSF: Odour Safety Factor

NOAEL :No Observed Adverse Effect Level

LOAEL: Lowest Observed Adverse Effect Level

TLV: Threshold Limit Value

LOD: Limit Of Detection

OTV: Odour Threshold Value

BCF: BioConcentration Factors

BEI: Biological Exposure Index

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TEL (+61 3) 9572 4700.