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**Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

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**PRODUCT NAME**

MICROSIELD 4 Chlorhexidine Surgical Handwash

**SYNONYMS**

Manufacturers Codes: 61351, 61221, 60243  
Chlorhexidine Antiseptic Skin Cleanser

**PRODUCT USE**

Antiseptic skin cleanser for external use, hand and body washing.

**SUPPLIER**

Company: Johnson & Johnson Medical Pty Ltd  
Address:  
1-5 Khartoum Road  
North Ryde  
NSW, 2113  
AUS  
Telephone: +61 2 9878 9000  
Telephone: 1800 257 210  
Emergency Tel: 13 11 26  
Emergency Tel: +64 3 474 7000 NZ  
Fax: 1800 808 233

Company: Johnson & Johnson Medical Pty Ltd  
Address:  
PO Box 134  
North Ryde  
NSW, 2113  
AUS

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**Section 2 - HAZARDS IDENTIFICATION**

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**STATEMENT OF HAZARDOUS NATURE**

**HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. According to the  
Criteria of NOHSC, and the ADG Code.**

**POISONS SCHEDULE**

None

**RISK**

Irritating to skin.

**SAFETY**

Do not breathe gas/fumes/vapour/spray.  
To clean the floor and all objects contaminated by this material, use water and detergent.  
If swallowed, IMMEDIATELY contact Doctor or Poisons Information Centre. (show this container or label).

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**Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS**

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NAME	CAS RN	%
chlorhexidine gluconate	18472-51-0	4
isopropanol	67-63-0	0-10
ethoxylated alkylphenol		0-10
fatty acid diethanolamide		0-10
acetic acid glacial	64-19-7	0-10
dye		0-10
fragrance		0-10
cellulose	9004-34-6	0-10
water	7732-18-5	>30

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**Section 4 - FIRST AID MEASURES**

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**SWALLOWED**

- Immediately give a glass of water.
- First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

**EYE**

If this product comes in contact with the eyes:

- Immediately hold eyelids apart and flush the eye continuously with 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.
- Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
- Transport to hospital or doctor without delay.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

**SKIN**

No adverse effects anticipated from normal use.

If skin irritation 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.

**INHALED**

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

**NOTES TO PHYSICIAN**

Suggested treatment regime for biguanide intoxication:

- Establish airway and assist ventilation with positive end expiratory pressure, if required, after endotracheal intubation. Circulatory competence must be maintained - monitor blood pressure carefully.
- Induction of emesis with Ipecac may be contraindicated as a result of biguanide-induced gastric mucosal irritation.
- Gastric lavage, following endotracheal intubation may be preferred. Activated charcoal and cathartics placed through the lavage tube may be useful.
- Forcing fluids may be counterproductive and result in fluid overload.

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- Haemodialysis may be useful as, in addition to facilitating the removal of biguanide and excess lactate, it permits the administration of adequate amounts of sodium bicarbonate without the risk of fluid overload or hypernatraemia.
  - Hypoglycaemia can be treated immediately with 50 ml of 50% glucose intravenously in adults or 0.5 g/kg per dose in children.
  - Acidosis may be treated with IV sodium bicarbonate (1-2 mEq/kg); doses of 44-50 mEq every 15 minutes may be required. Ensure that arterial blood gases, serum sodium chloride, potassium and ECG are monitored. The patient may require 200-400 mEq of sodium bicarbonate.
  - Dehydration and hypovolaemia may require placement of a central venous line.
  - Hypotension may be treated by placing the patient in Trendelenburg's position and the cautious use of IV fluids. Pressor amines should be used cautiously, with blood lactate monitoring, as they may increase lactic acid production.
- ELLENHORN and BARCELOUX: Medical Toxicology; Diagnosis and Treatment of Human Poisoning. 1988.  
Treat symptomatically.
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## Section 5 - FIRE FIGHTING MEASURES

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### 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.

### FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves for fire only.
- 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 emulsion is not combustible under normal conditions. However, it will break down under fire conditions and the hydrocarbon component will burn.

- Non combustible.
  - Not considered a significant fire risk, however containers may burn.
- Decomposition may produce toxic fumes of, carbon dioxide (CO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), other pyrolysis products typical of burning organic material.  
May emit poisonous fumes.  
May emit corrosive fumes.

**FIRE INCOMPATIBILITY**

None known.

**HAZCHEM**

None

**Personal Protective Equipment**

Gas tight chemical resistant suit.

Limit exposure duration to 1 BA set 30 mins.

**Section 6 - ACCIDENTAL RELEASE MEASURES****EMERGENCY PROCEDURES****MINOR SPILLS**

Slippery when spilt.

- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact 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.
- 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.

**EMERGENCY RESPONSE PLANNING GUIDELINES (ERPG)**

The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour WITHOUT experiencing or developing

life-threatening health effects is:

isopropanol	2000 ppm
acetic acid glacial	250 ppm
cellulose	500 mg/m <sup>3</sup>
water	500 mg/m <sup>3</sup>

irreversible or other serious effects or symptoms which could impair an individual's ability to take protective action is:

isopropanol	2000 ppm
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acetic acid glacial	35 ppm
cellulose	500 mg/m <sup>3</sup>
water	500 mg/m <sup>3</sup>

other than mild, transient adverse effects  
without perceiving a clearly defined odour is:

isopropanol	400 ppm
acetic acid glacial	5 ppm
cellulose	30 mg/m <sup>3</sup>
water	500 mg/m <sup>3</sup>

The threshold concentration below which most people  
will experience no appreciable risk of health effects:

isopropanol	400 ppm
acetic acid glacial	5 ppm
cellulose	15 mg/m <sup>3</sup>
water	500 mg/m <sup>3</sup>







American Industrial Hygiene Association (AIHA)

Ingredients considered according to the following cutoffs

Very Toxic (T+)	>= 0.1%	Toxic (T)	>= 3.0%
R50	>= 0.25%	Corrosive (C)	>= 5.0%
R51	>= 2.5%		
else	>= 10%		

where percentage is percentage of ingredient found in the mixture

**SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS**

					
+	X	+	X	0	+

*+*: May be stored together  
*-*: May be stored together with specific preventions  
*X*: Must not be stored together

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

**Section 7 - HANDLING AND STORAGE**

**PROCEDURE FOR HANDLING BULK OR LARGE QUANTITIES**

- Avoid all personal contact, including inhalation.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- Avoid contact with moisture.
- 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 storing and handling recommendations.
  - Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.
- DO NOT allow clothing wet with material to stay in contact with skin.

**SUITABLE CONTAINER**

- Lined metal can, Lined metal pail/ can
- Plastic pail
- Polyliner drum
- Packing as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

**STORAGE INCOMPATIBILITY**

Reacts with metals producing flammable / explosive hydrogen gas.  
Avoid strong bases.

**STORAGE REQUIREMENTS**

- Store in original containers.
- Keep containers securely sealed.
- 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 storing and handling recommendations.

**Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION**

**EXPOSURE CONTROLS**

Source	Material	TWA ppm	TWA mg/m <sup>3</sup>	STEL ppm	STEL mg/m <sup>3</sup>	Peak ppm	Peak mg/m <sup>3</sup>
Australia Exposure Standards	Isopropyl alcohol	400	983	500	1,230		
Australia Exposure Standards	Acetic acid	10	25	15	37		
Australia Exposure Standards	Cellulose (paper fibre) (a)		10				
No data available:	chlorhexidine gluconate as (CAS: 18472-51-0)						
No data available:	cellulose as (CAS: 68442-85-3)						
No data available:	water as (CAS: 7732-18-5)						

**EMERGENCY EXPOSURE LIMITS**

Material	Revised IDLH Value (ppm)	Revised IDLH Value (mg/m <sup>3</sup> )
Isopropyl alcohol	2,000 [LEL]	
Acetic acid	50	

**NOTES**

Values marked LEL indicate that the IDLH was based on 10% of the lower explosive limit for safety considerations even though the relevant toxicological data

indicated that irreversible health effects or impairment of escape existed only at higher concentrations.

#### ODOUR SAFETY FACTOR (OSF)

OSF=21 ("ACETIC ACID, GLACIAL")

Exposed individuals are NOT reasonably expected to be warned, by smell, that the Exposure Standard is being exceeded.

Odour Safety Factor (OSF) is determined to fall into either Class C, D or E.

The Odour Safety Factor (OSF) is defined as:

OSF= Exposure Standard (TWA) ppm/ Odour Threshold Value (OTV) ppm

Classification into classes follows:

Class	OSF	Description
A	550	Over 90% of exposed individuals are aware by smell that the Exposure Standard (TLV-TWA for example) is being reached, even when distracted by working activities
B	26-550	As "A" for 50-90% of persons being distracted
C	1-26	As "A" for less than 50% of persons being distracted
D	0.18-1	10-50% of persons aware of being tested perceive by smell that the Exposure Standard is being reached
E	<0.18	As "D" for less than 10% of persons aware of being tested

#### EXPOSURE STANDARDS FOR MIXTURE

"Worst Case" computer-aided prediction of vapour components/concentrations:

"Worst Case" computer-aided prediction of vapour components/concentrations:

Composite Exposure Standard for Mixture (TWA) (mg/m<sup>3</sup>): 0.1 mg/m<sup>3</sup>

"Worst Case" computer-aided prediction of vapour components/concentrations:

Composite Exposure Standard for Mixture (TWA) (mg/m<sup>3</sup>):

If the breathing zone concentration of ANY of the components listed below is exceeded, "Worst Case" considerations deem the individual to be overexposed.

Component Breathing Zone ppm Breathing Zone mg/m<sup>3</sup> Mixture Conc: (%).

Component	Breathing zone (ppm)	Breathing Zone (mg/m <sup>3</sup> )	Mixture Conc (%)
chlorhexidine gluconate	0.00	0.1000	4.0

"Worst Case" computer-aided prediction of vapour components/concentrations:

Composite Exposure Standard for Mixture (TWA) (mg/m<sup>3</sup>):

If the breathing zone concentration of ANY of the components listed below is exceeded, "Worst Case" considerations deem the individual to be overexposed.

Component Breathing Zone ppm Breathing Zone mg/m<sup>3</sup> Mixture Conc: (%)

Operations which produce a spray/mist or fume/dust, introduce particulates to the breathing zone.

If the breathing zone concentration of ANY of the components listed below is exceeded, "Worst Case" considerations deem the individual to be overexposed.

"Worst Case" computer-aided prediction of vapour components/concentrations:

Composite Exposure Standard for Mixture (TWA) (mg/m<sup>3</sup>):

If the breathing zone concentration of ANY of the components listed below is exceeded, "Worst Case" considerations deem the individual to be overexposed.

Component Breathing Zone ppm Breathing Zone mg/m<sup>3</sup> Mixture Conc: (%)

Operations which produce a spray/mist or fume/dust, introduce particulates to the breathing zone.

If the breathing zone concentration of ANY of the components listed below is exceeded, "Worst Case" considerations deem the individual to be overexposed.

At the "Composite Exposure Standard for Mixture" (TWA) (mg/m<sup>3</sup>): 4 mg/m<sup>3</sup>

#### INGREDIENT DATA

##### CHLORHEXIDINE GLUCONATE:

CEL TWA: 0.0027 ppm; 0.1 mg/m<sup>3</sup>\*

\*[AstraZeneca]

##### ISOPROPANOL:

Odour Threshold Value: 3.3 ppm (detection), 7.6 ppm (recognition)

Exposure at or below the recommended TLV-TWA and STEL is thought to minimise the potential for inducing narcotic effects or significant irritation of the eyes or upper respiratory tract. It is believed, in the absence of hard evidence, that this limit also provides protection against the development of chronic health effects. The limit is intermediate to that set for ethanol, which is less toxic, and n-propyl alcohol, which is more toxic, than isopropanol.

##### ACETIC ACID GLACIAL:

Odour Threshold Value: 0.037-0.15 ppm (detection)

NOTE: Detector tubes for acetic acid, measuring in excess of 1 ppm, are commercially available.

Exposure at or below the TLV-TWA and TLV-STEL is thought to protect the worker against conjunctival, nose and respiratory tract irritation.

##### CELLULOSE:

Cellulose is considered a nuisance dust which has little adverse effect on lung and does not produce significant organic disease or toxic effects when appropriate controls are applied.

##### WATER:

No exposure limits set by NOHSC or ACGIH.

#### PERSONAL PROTECTION

##### EYE

- 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 lens 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].

**HANDS/FEET**

Wear chemical protective gloves, eg. PVC.

Wear safety footwear or safety gumboots, eg. Rubber.

NOTE: The material may produce skin sensitisation in predisposed individuals.

Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.

**OTHER**

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

**RESPIRATOR**

Respiratory protection is required when ANY "Worst Case" vapour-phase concentration is exceeded (see Computer Prediction in "Exposure Standards").

Protection Factor (Min)	Half-Face Respirator	Full-Face Respirator
10 x ES	AB-AUS AB-PAPR-AUS	- -
50 x ES	- -	AB-AUS AB-PAPR-AUS
100 x ES	- -	AB-2 AB-PAPR-2

^ - Full-face.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required.

For further information consult site specific CHEMWATCH data (if available), or your Occupational Health and Safety Advisor.

**ENGINEERING CONTROLS**

General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas.

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**Section 9 - PHYSICAL AND CHEMICAL PROPERTIES**

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**APPEARANCE**

Pale pink viscous liquid with a cologne fragrance; partly mixes with water.

**PHYSICAL PROPERTIES**

Liquid.

Molecular Weight: Not Applicable

Melting Range (C): Not Available

Solubility in water (g/L): Partly Miscible

pH (1% solution): Not Available

Volatile Component (%vol): Not Available

Relative Vapour Density (air=1): Not Available

Lower Explosive Limit (%): Not Applicable

Autoignition Temp (C): Not Available

State: Liquid

Boiling Range (C): Not Available

Specific Gravity (water=1): 1.02

pH (as supplied): 5.3

Vapour Pressure (kPa): Not Available

Evaporation Rate: Not Available

Flash Point (C): Not Applicable

Upper Explosive Limit (%): Not Applicable

Decomposition Temp (°C): Not Available

Viscosity: Not Available

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**Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION**

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**CONDITIONS CONTRIBUTING TO INSTABILITY**

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

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**Section 11 - TOXICOLOGICAL INFORMATION**

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**POTENTIAL HEALTH EFFECTS****ACUTE HEALTH EFFECTS****SWALLOWED**

The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence. The material may still be damaging to the health of the individual, following ingestion, especially where pre-existing organ (e.g liver, kidney) damage is evident. Present definitions of harmful or toxic substances are generally based on doses producing mortality rather than those producing morbidity (disease, ill-health). Gastrointestinal tract discomfort may produce nausea and vomiting. In an occupational setting however, ingestion of insignificant quantities is not thought to be cause for concern.

**EYE**

When applied to the eye(s) of animals, the material produces severe ocular lesions which are present twenty-four hours or more after instillation.

The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

**SKIN**

Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions.

The material may accentuate any pre-existing dermatitis condition.

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.

The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling the epidermis.

Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.

Not considered to cause discomfort through normal use.

**INHALED**

Not normally a hazard due to non-volatile nature of product.

The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models).

Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

Inhalation of aerosols can irritate mucous membranes and respiratory tract.

**CHRONIC HEALTH EFFECTS**

Limited evidence suggests that repeated or long-term occupational exposure may produce cumulative health effects involving organs or biochemical systems. There exists limited evidence that shows that skin contact with the material is capable either of inducing a sensitisation reaction in a significant number of individuals, and/or of producing positive response in experimental animals.

Sensitisation may result in allergic dermatitis responses including rash, itching, hives or swelling of extremities. Chronic ingestion of chlorhexidine can result in liver and kidney damage.

**TOXICITY AND IRRITATION**

Not available. Refer to individual constituents.

unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances

**CHLORHEXIDINE GLUCONATE:****TOXICITY**

Oral(rat) LD50: 2000 mg/kg

Subcutaneous (rat) LD50: 3320 mg/kg

Intravenous (rat) LD50: 24.2 mg/kg

**IRRITATION**

Nil Reported

**ISOPROPANOL:****TOXICITY**

Oral (human) LDLo: 3570 mg/kg

Oral (human) TDLo: 223 mg/kg

Oral (man) TDLo: 14432 mg/kg

Oral (rat) LD50: 5045 mg/kg

Dermal (rabbit) LD50: 12800 mg/kg

**IRRITATION**

Skin (rabbit): 500 mg - Mild

Eye (rabbit): 10 mg - Moderate

Eye (rabbit): 100mg/24hr-Moderate

Eye (rabbit): 100 mg - SEVERE

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.

## ACETIC ACID GLACIAL:

## TOXICITY

Oral (human) TDLo: 1.47 mg/kg

Unreport (man) LDLo: 308 mg/kg

Oral (rat) LD50: 3310 mg/kg

Inhalation (human) TCLo: 816 ppm/3 min

Inhalation (rat) LCLo: 16000 ppm/4 hr

Dermal (rabbit) LD50: 1060 mg/kg

## IRRITATION

Skin (human):50mg/24hr - Mild

Skin (rabbit):525mg (open)-SEVERE

Eye (rabbit): 0.05mg (open)-SEVERE

## CELLULOSE:

## TOXICITY

Oral (rat) LD50: &gt; 5000 mg/kg

Dermal (rabbit) LD50: &gt; 2000 mg/kg

## IRRITATION

Nil Reported

## WATER:

No significant acute toxicological data identified in literature search.

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**Section 12 - ECOLOGICAL INFORMATION**

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Octanol/water partition coefficients cannot easily be determined for surfactants because one part of the molecule is hydrophilic and the other part is hydrophobic. Consequently they tend to accumulate at the interface and are not extracted into one or other of the liquid phases. As a result surfactants are expected to transfer slowly, for example, from water into the flesh of fish. During this process, readily biodegradable surfactants are expected to be metabolised rapidly during the process of bioaccumulation. This was emphasised by the OECD Expert Group stating that chemicals are not to be considered to show bioaccumulation potential if they are readily biodegradable.

Several anionic and nonionic surfactants have been investigated to evaluate their potential to bioconcentrate in fish. BCF values (BCF - bioconcentration factor) ranging from 1 to 350 were found. These are absolute maximum values, resulting from the radiolabelling technique used. In all these studies, substantial oxidative metabolism was found resulting in the highest radioactivity in the gall bladder. This indicates liver transformation of the parent compound and biliary excretion of the metabolised compounds, so that "real" bioconcentration is overstated. After correction it can be expected that "real" parent BCF values are one order of magnitude less than those indicated above, i.e. "real" BCF is <100. Therefore the usual data used for classification by EU directives to determine whether a substance is "Dangerous to the Environment" has little bearing on whether the use of the surfactant is environmentally acceptable.

DO NOT discharge into sewer or waterways.

Refer to data for ingredients, which follows:

## ISOPROPANOL:

log Kow (Sangster 1997): 0.05

log Pow (Verschueren 1983): -0.5714285

BOD5: 60%

BOD20: 78%

COD: 2.23

ThOD: 2.4

Half-life Soil - High (hours): 168

Half-life Soil - Low (hours): 24

Half-life Air - High (hours): 72  
 Half-life Air - Low (hours): 6.2  
 Half-life Surface water - High (hours): 168  
 Half-life Surface water - Low (hours): 24  
 Half-life Ground water - High (hours): 336  
 Half-life Ground water - Low (hours): 48  
 Aqueous biodegradation - Aerobic - High (hours): 168  
 Aqueous biodegradation - Aerobic - Low (hours): 24  
 Aqueous biodegradation - Anaerobic - High (hours): 672  
 Aqueous biodegradation - Anaerobic - Low (hours): 96  
 Photooxidation half-life water - High (hours): 1.90E+05  
 Photooxidation half-life water - Low (hours): 4728  
 Photooxidation half-life air - High (hours): 72  
 Photooxidation half-life air - Low (hours): 6.2

DO NOT discharge into sewer or waterways.

log Kow: -0.16- 0.28

Half-life (hr) air: 33-84

Half-life (hr) H2O surface water: 130

Henry's atm m<sup>3</sup> /mol: 8.07E-06

BOD 5 if unstated: 1.19,60%

COD: 1.61-2.30,97%

ThOD: 2.4

Aquatic toxicity

(fish) 24-96h TLm: 42.5-240 mg/l

(fish) 96h LC50: 4200-9640 mg/l \*

(daphnia) 48h EC50: 2285 mg/l \*

BOD 20: >70% \*

\* [Akzo Nobel]

ACETIC ACID GLACIAL:

Fish LC50 (96hr.) (mg/l): 88,92

Daphnia magna EC50 (48hr.) (mg/l): 32

Algae IC50 (72hr.) (mg/l): 90

log Kow (Prager 1995): -0.31

log Kow (Sangster 1997): -0.17

log Pow (Verschuieren 1983): 1.8E+0

log Kow: -0.3- -0.17

Half-life (hr) air: 641

Henry's atm m<sup>3</sup> /mol: 1.00E-09

BOD 5 if unstated: 0.34-0.88,36%

BCF: <1

Toxicity Fish: LC50 (96h) 75-88 mg/l

Toxicity invertebrate: cell mult. inhib. 78-4000mg/L

Bioaccumulation: not sig

Degradation Biological: readily degrad

processes Abiotic: Rxn OH\*,hydrol

Acetic acid is degraded photochemically in the atmosphere to produce hydroxyl radicals (estimated typical half-life of 22 days).

Physical removal of acetates on atmospheric particulates may occur via wet or dry deposition.

Natural water will neutralise dilute solutions of acetic acid.

Spills of acetic acid on soil will readily biodegrade.

Acetic acid is not expected to bioconcentrate in the aquatic system.

Low concentrations of acetic acid are harmful to fish.

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Drinking water standards: none available.

Soil Guidelines: none available.

Air Quality Standards: none available.

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### Section 13 - DISPOSAL CONSIDERATIONS

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- 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 licenced land-fill or Incineration in a licenced apparatus (after admixture with suitable combustible material)

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

If container can not be cleaned sufficiently well to ensure none of the original product remains 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.

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### Section 14 - TRANSPORTATION INFORMATION

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#### HAZCHEM

None

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS:UN,IATA,IMDG

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### Section 15 - REGULATORY INFORMATION

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#### POISONS SCHEDULE

None

#### REGULATIONS

chlorhexidine gluconate (CAS: 18472-51-0) is found on the following regulatory lists;

Australia Inventory of Chemical Substances (AICS)

isopropanol (CAS: 67-63-0) is found on the following regulatory lists;

Australia High Volume Industrial Chemical List (HVICL)

Australia Inventory of Chemical Substances (AICS)

International Agency for Research on Cancer (IARC) Carcinogens

OECD Representative List of High Production Volume (HPV) Chemicals

acetic acid glacial (CAS: 64-19-7) is found on the following regulatory lists;

Australia High Volume Industrial Chemical List (HVICL)

Australia Inventory of Chemical Substances (AICS)

Australia Poisons Schedule

International Council of Chemical Associations (ICCA) - High Production Volume List

OECD Representative List of High Production Volume (HPV) Chemicals

cellulose (CAS: 9004-34-6) is found on the following regulatory lists;  
Australia Inventory of Chemical Substances (AICS)  
OECD Representative List of High Production Volume (HPV) Chemicals  
cellulose (CAS: 68442-85-3) is found on the following regulatory lists;  
Australia Inventory of Chemical Substances (AICS)  
OECD Representative List of High Production Volume (HPV) Chemicals

water (CAS: 7732-18-5) is found on the following regulatory lists;  
Australia Inventory of Chemical Substances (AICS)  
OECD Representative List of High Production Volume (HPV) Chemicals

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#### Section 16 - OTHER INFORMATION

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#### Ingredients with multiple CAS Nos

Ingredient Name	Cas Nos
cellulose	9004-34-6, 68442-85-3

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