



SAFETY DATA SHEET

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Section 1: IDENTIFICATION of CHEMICAL PRODUCT and COMPANY

Product Identifier:	Chlorhex S
Product Code:	61300 (5 L)
Recommended Use:	A 40 mg/mL chlorhexidine gluconate antiseptic solution, for the removal of bacteria from the hands and other skin areas prior to veterinary surgery and routine procedures involving the application or removal of dressings and stitches.
Restrictions on Use:	None
Company Identification:	Jurox Pty Limited
Address:	85 Gardiner Street, Rutherford, NSW 2320, Australia
Email:	customerservice@jurox.com.au
Customer Centre:	1800 023 312
National Poisons Information Centre:	13 11 26 (24 hours)
Emergency Telephone Number:	1800 023 312 (9am – 5pm, Monday to Friday)

Section 2: HAZARDS IDENTIFICATION

This product has been assessed according to GHS and is classified as follows:

GHS Category	Hazard code	Hazard Statement
Flammable Liquid Category 3	H226	Flammable liquid and vapour
Serious Eye Damage Category 1	H318	Causes serious eye damage
Skin Sensitizer Category 1	H317	May cause an allergic skin reaction
Chronic Aquatic Hazard Category 2	H411	Toxic to aquatic life with long lasting effects

Signal word: DANGER

GHS Pictograms:



Flame



Corrosive



Exclamation
Mark



Aquatic
Toxicant



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Precautionary statements:

Prevention

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing vapours/spray.
P273 Avoid release to the environment.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear eye protection/face protection.

Response

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTRE or doctor.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P391 Collect spillage.

Storage

No storage statement.

Disposal

P501 Dispose of contents in accordance with local/national regulations.

Section 3: COMPOSITION / INFORMATION on INGREDIENTS

INGREDIENT	CAS No.	CONTENT
Chlorhexidine gluconate	18472-51-0	4%
Nonylphenol, ethoxylated	127087-87-0	10 – 30%
Ethanol	64-17-5	≤ 5%
Lauric diethanolamide	120-40-1	≤ 5%
Ingredients not contributing to the hazards	-	≥ 60%

Section 4: FIRST AID MEASURES

General Information: Consult the National Poisons Centre on 13 11 26 or a doctor immediately in every case of suspected chemical poisoning. Never give fluids or induce vomiting if patient is unconscious or convulsing regardless of cause of injury. If medical advice/attention is needed, have this SDS, product container or label at hand.

Symptoms and Effects of Exposure: May result in nausea and vomiting if ingested. Skin contact may cause an allergic reaction in certain individuals.

Inhalation: If fumes, aerosols or combustion products are inhaled remove from contaminated area, further measures are usually unnecessary. If respiratory symptoms occur, remove patient to fresh air. Lay patient



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down and keep warm and rested. If breathing is shallow or has stopped, ensure airway is clear and apply resuscitation. If breathing is difficult, give oxygen and seek medical assistance immediately.

Ingestion: If swallowed do NOT induce vomiting. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. 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. For advice, contact the National Poisons Centre on 13 11 26.

Skin: If unintended 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.

Eye: If eye contact occurs: 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 20 minutes. Transport to hospital or doctor without delay. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Recommended First Aid Facilities: Ready access to running water and soap is required. Accessible eyewash is required.

Advice to Doctor: Contains chlorhexidine gluconate. Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES

Flash Point: 56°C

Hazardous Combustion Products: If involved in a fire, may emit noxious and irritant fumes.

Extinguishing Media: There is no restriction on the type of extinguisher which may be used. Use extinguishing media suitable for surrounding area.

Protective Equipment: Protective gloves and breathing apparatus.

HAZCHEM Code: •3Y

Section 6: ACCIDENTAL RELEASE MEASURES

Spills and Disposal: Shut off all possible sources of ignition and exclude non-essential people from the area. Wear gloves and appropriate protective clothing. Contain spill and absorb with inert material such as soil, sand or absorbent granules and place in a sealable waste container. Ventilate area and wash spill site after pick-up complete. Dispose of waste safely in an approved landfill. In the event of a major spill, prevent spillage from entering drains or water courses and call emergency services.

Protective Clothing: For appropriate personal protective equipment see section 8.

Environmental Precautions: Prevent from entering drains, waterways or sewers. If spill does enter waterways contact local authority.



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Section 7: HANDLING AND STORAGE

Handling: The product should be handled with care to avoid exposure. Avoid contact with eyes and inhalation of vapours. Use personal protective equipment as required. Do not eat, drink or smoke while handling product.

Storage: Keep out of reach of children. Store in original containers in approved flammable liquid storage area. Keep cool (below 30°C).

Other Information: Avoid contact with incompatible substances as listed in Section 10. Always read the label before use.

Section 8: EXPOSURE CONTROLS and PERSONAL PROTECTION

This SDS describes personal protective measures relating to long term industrial and manufacturing exposure and emergency situations, such as accidents and spills. See product label for personal protective measures during normal use of the marketed product.

Exposure Limits: An exposure limit for the mixture has not been established. Available exposure standards for the ingredients are as follows:

Occupational Exposure Limits (OEL)

Source	Ingredient	TWA	STEL
Australian Exposure Standards	Ethanol	1880 mg/m ³ , 1000 ppm	Not available

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
Nonylphenol, ethoxylated	30 mg/m ³	330 mg/m ³	2,000 mg/m ³
Ethanol	Not available	Not available	Not available
Lauric diethanolamide	0.12 ppm	1.4 ppm	46 ppm

Engineering Controls: Use only in a well-ventilated area. Make sure that the work environment remains clean and that vapours and mists are minimised.

Personal Protective Equipment (PPE):

Eye protection: protective glasses or goggles are recommended when this product is being used.

Skin protection: If you believe you may have a sensitisation to this product or any of its declared ingredients, prevent skin contact by wearing chemical protective gloves e.g. PVC.

Respiratory protection: Not required for the normal use of this product.



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Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	A clear red solution	Vapour Pressure:	Not available
Odour:	Not available	Vapour Density:	Not available
Odour Threshold:	Not available	Relative Density:	Approx. 1.03
pH:	5.5 – 7.0	Solubility:	Soluble in water
Melting Point / Freezing point:	Not available	Partition Coefficient:	Not available
Initial Boiling Point and Boiling Range:	Not available	Auto-Ignition Temperature:	Not available
Flashpoint:	56°C (PMCC)	Decomposition Temperature:	Not applicable
Evaporation Rate:	Not available	Viscosity:	Not available
Upper / Lower Flammability or Explosive Limits:	Not available		

Section 10: STABILITY AND REACTIVITY

Reactivity: This product is unlikely to react or polymerise under normal storage conditions.

Stability: When stored appropriately this product should show no significant degradation within the expiry period shown on the label.

Conditions to Avoid: Protect this product from light.

Incompatible Materials: Oxidising agents.

Hazardous Decomposition Products: No data available.

Section 11: TOXICOLOGICAL INFORMATION

Acute Toxicity:

Ingestion: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be acutely toxic by the oral route. If ingested may cause nausea and vomiting.

Chlorhexidine gluconate: Oral LD₅₀: 2000 mg/kg (rat); 1260 mg/kg (mouse).

Nonylphenol, ethoxylated : Oral LD₅₀: 1310 mg/kg (rat).

Ethanol : Oral LD₅₀: 1501 mg/kg (rat), 3450 mg/kg (mouse).

Lauric diethanolamide : Oral LD₅₀: > 2000 mg/kg (rat).

Inhalation: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be acutely toxic by the inhalation route.

Chlorhexidine gluconate: No data.

Nonylphenol, ethoxylated: No data.

Ethanol: Inhalation LC₅₀: 124.7 mg/l/4H, (rat).

Lauric diethanolamide : No data.



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Dermal: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be acutely toxic by the dermal route.

Chlorhexidine gluconate: No data.

Nonylphenol, ethoxylated : Dermal LD₅₀: 1780 mg/kg (rabbit).

Ethanol : No data.

Lauric diethanolamide : No data.

Skin Corrosion / Irritation: The mixture is not classified as skin corrosive or irritant, however, chlorhexidine, nonylphenol ethoxylate and ethanol are considered to be mild to moderate skin irritants.

Chlorhexidine: Skin (human): No data.

Nonylphenol, ethoxylated: Skin (human): 15 mg/3D mild.

Ethanol: Skin (rabbit): 20 mg/24hr-moderate.

Lauric diethanolamide : No data.

Serious Eye Damage / Irritation: The mixture has the classification **Serious Eye Damage Category 1** due to the presence of ingredients classified as eye corrosive - chlorhexidine gluconate, nonylphenol ethoxylate and lauric diethanolamide.

Respiratory or Skin Sensitisation: The mixture has the classification **Skin Sensitizer Category 1** due to the presence of chlorhexidine gluconate. Based on available data for the ingredients, the mixture is not considered to be a respiratory sensitiser.

Germ Cell Mutagenicity: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be mutagenic.

Carcinogenicity: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be carcinogenic.

Reproductive Toxicity: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be a reproductive or developmental toxicant or to have any effects on or via lactation.

STOT: Single exposure: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be a specific target organ toxicant after single exposure.

STOT: Repeat exposure: No data for the mixture is available. Based on available data for the ingredients, the mixture is not considered to be a specific target organ toxicant after repeat exposure. Animal testing suggests that repeated exposure to nonylphenol may cause liver changes and kidney dysfunction.

Aspiration hazard: No data available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: Based on available data for the ingredients, the mixture is classified as **Chronic Aquatic Hazard Category 2**. Nonylphenol ethoxylates are highly toxic to aquatic organisms, and in the environment degrade to the more toxic and environmentally persistent nonylphenols. Chlorhexidine gluconate is very ecotoxic in the aquatic environment with long lasting effects.

Fish

Chlorhexidine gluconate: LC₅₀ (96h): 2.08mg/L.

Nonylphenol, ethoxylated: LC₅₀ (96h): >10 mg/L.

Ethanol: LC₅₀ (96h): Fish 11 mg/L, NOEC (84 days): 0.000375 mg/L.

Lauric diethanolamide: LC₅₀ (96h): 2.4 mg/L.



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Crustacea

Chlorhexidine gluconate: EC₅₀ (48h): 0.087 mg/L

Nonylphenol, ethoxylated: EC₅₀ (48h): 14 mg/L.

Ethanol: EC₅₀ (48h): 2 mg/L.

Lauric diethanolamide: EC₅₀ (48h): ca.3.2mg/L, NOEC (21days): 0.07mg/L.

Algae and other aquatic plants

Chlorhexidine gluconate: EC₅₀ (72h): 0.011 mg/L, BCF (24h): 0.05 mg/L, NOEC (72h): 0.007 mg/L.

Nonylphenol, ethoxylated: EC₅₀ (96h): 12mg/L, NOEC (96h): 8 mg/L.

Ethanol: EC₅₀ (96h): 17.9 mg/L.

Lauric diethanolamide: EC₅₀ (96h): 23.3 mg/L.

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation potential	Mobility
Chlorhexidine gluconate	No data available	No data available	No data available	No data available
Nonylphenol, ethoxylated	No data available	No data available	No data available	No data available
Ethanol	LOW (Half-life = 2.17 days)	LOW (Half-life = 5.08 days)	LOW (LogKOW = -0.31)	HIGH (KOC = 1)
Lauric diethanolamide	LOW	LOW	LOW (LogKOW = 2.885)	LOW (KOC = 51.65)

Section 13: DISPOSAL INFORMATION

Product Disposal: Dispose of product only by using according to label or at an approved landfill.

Container Disposal: Crush or puncture and bury in an approved landfill if an approved recycling system is not available.

Section 14: TRANSPORT INFORMATION

Not considered a Dangerous Good for land, sea and air transport.

LAND (ADG): Aqueous solutions containing less than 24% alcohol by volume are not subject to the ADG Code (Special Provision No. 144).

SEA (IMDG Code): Aqueous solutions containing less than 24% alcohol by volume are not subject to the IMDG Code (Special Provision No. 144).

AIR (ICAO/IATA): Aqueous solutions containing less than 24% alcohol by volume are not subject to the IATA Code (Special Provision No. A58).

Section 15: REGULATORY INFORMATION

Poison Schedule (SUSMP): S5

AICS: All of the significant ingredients in this formulation are compliant with NICNAS regulations.



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Section 16: OTHER INFORMATION

This information is based on data believed by Jurox Pty Limited to be accurate at the time of writing but is subject to change without notice. It is given in good faith, but no warranty expressed or implied is made as to its accuracy, completeness otherwise and no assumption of liability from howsoever arising is made by Jurox Pty Limited by reason of the provision of this information. Every person dealing with the materials referred to herein does so at his/her own risk absolutely and must make independent determinations of suitability and completeness of information from all sources to ensure their proper use.

Legend:

ADG	Australian Code for the Transport of Dangerous Goods by Road & Rail, 7 th Edition.
AICS	Australian Inventory of Chemical Substances.
BCF	Bioconcentration Factor. The ratio of a chemical's concentration in an organism or biota to the chemical's concentration in water.
CAS No.	Chemical Abstracts Service Registry Number.
EC₅₀	The median effect concentration, being a statistically derived concentration of a substance that can be expected to cause an adverse reaction in 50% of organisms or a 50% reduction in growth or in the growth rate of organisms.
GHS	Globally Harmonized System of Classification and Labelling of Chemicals.
Hazchem Code	Emergency action code of numbers and letters that provide information to emergency services especially firefighters.
IATA	International Air Transport Association.
ICAO	International Civil Aviation Organization.
IMDG Code	International Maritime Dangerous Goods Code.
KOC	Soil-Water Partition Coefficient. The ratio of a chemical's concentration that is adsorbed in the soil to the concentration of chemical in solution.
KOW	Octanol Water Partition Coefficient. The ratio of a compound's concentration in a known volume of n-octanol to its concentration in a known volume of water after the octanol and water have reached equilibrium.
LC₅₀	The median lethal concentration, being a statistically derived concentration of a substance that can be expected to cause death in 50% of animals.
LD₅₀	The median lethal dose, being a statistically derived single dose of a substance that can be expected to cause death in 50% of animals.
NICNAS	National Industrial Chemicals Notification and Assessment Scheme.
NOEC	No Observable Effect Concentration.
OEL	Occupational Exposure Limits.
PMCC	Pensky-Martens Closed Cup method for determining flash point.
PPE	Personal Protective Equipment.
PVC	Polyvinyl Chloride.
SDS	Safety Data Sheet.
STEL	Short Term Exposure Limits.
STOT	Specific Target Organ Toxicity.
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons.
SWA	Safe Work Australia.
TEELs	Temporary Emergency Exposure Limits. Guidelines designed to predict the response of members of the general public to different concentrations of a chemical during an emergency response incident.
TEEL-1	The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience notable discomfort, irritation, or certain asymptomatic, nonsensory effects. However, these effects are not disabling and are transient and reversible upon cessation of exposure.
TEEL-2	The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience irreversible or other serious, long-lasting, adverse health effects or an impaired ability to escape.



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TEEL-3 The airborne concentration of a substance above which it is predicted that the general population, including susceptible individuals, could experience life-threatening adverse health effects or death.

TWA Time-Weighted Average. The average amount of a substance a person can be exposed to over an eight-hour day.

References:

ChemID Plus
EPA New Zealand Chemical Classification and Information Database (CCID)
HSDB (Hazardous Substances Data Bank)
U.S. Environmental Protection Agency - Nonylphenol (NP) and Nonylphenol Ethoxylates (NPEs)
Action Plan [RIN 2070-ZA09]

Revision History:

Date of Revision	Reason
7 April 2015	Reclassification of substance to GHS classification and update of SDS to comply with SWA Code of Practice.
10 March 2020	Reclassification from Chronic Aquatic Hazard Category 3 to Category 2. Addition of Emergency Limits for ingredients in Section 8. Additional toxicity data included in Section 12.

END OF SDS