

PT. Jayamas Medica Industri

By Pass Krian KM. 28, Sidoarjo
Jawa Timur - Indonesia



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Material Safety Data Sheet AC Swabs (Alcohol 70%, CHG 2% w/v)

Section 1: Chemical Product and Company Identification

Product Name: AC Swabs

CAS #: Mixtures

RTECS: Not Applicable

TSCA: TSCA 8(b) inventory; Water; Ethyl Alcohol;
Chlorhexidine Gluconate

CI#: N/A

Synonym: -

Chemical Formula: N/A

Contact Information:

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Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	%
Water	7732-18-5	28
Ethyl alcohol	64-17-5	70
Chlorhexidine gluconate	18472-51-0	2

Toxicological Data on Ingredients: Ethyl alcohol: ORAL (LD50): Acute: 7060 mg/kg [Rat]. 3450 mg/kg [Mouse].
VAPOR (LC50): Acute: 20000 ppm 8 hours [Rat]. 39000 mg/m 4 hours [Mouse].
Chlorhexidine gluconate: ORAL (Ld50): Acute: 2000 mg/kg [Rat]. 1260 mg/kg [Mouse]

Section 3: Hazards Identification

Potential Acute Health Effects:

Very hazardous in case of ingestion. Hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation.
Noncorrosive for skin.

Potential Chronic Health Effects:

Very hazardous in case of ingestion. Hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation.
Noncorrosive for skin. CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance is toxic to lungs, mucous membranes. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.

Skin Contact:

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cold water may be used. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms appear.

Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:

Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: The lowest known value is 363°C (685.4°F)

Flash Points: CLOSED CUP: 18.5°C (65.3°F).(estimated)

Flammable Limits: The greatest known range is LOWER: 3.3% UPPER: 19%

Products of Combustion: These products are carbon oxides (CO, CO₂).

Fire Hazards in Presence of Various Substances:

Highly flammable in presence of open flames and sparks, of heat.

Slightly flammable to flammable in presence of oxidizing materials.

Non-flammable in presence of shocks, of reducing materials, of combustible materials, of organic materials, of metals, of acids, of alkalis.

Explosion Hazards in Presence of Various Substances:

Slightly explosive in presence of open flames and sparks, of heat, of oxidizing materials, of acids.

Non-explosive in presence of shocks.

Fire Fighting Media and Instructions:

Flammable liquid, soluble or dispersed in water.

SMALL FIRE: Use DRY chemical powder.

LARGE FIRE: Use alcohol foam, water spray or fog.

Special Remarks on Fire Hazards:

Containers should be grounded. CAUTION: MAY BURN WITH NEAR INVISIBLE FLAME Vapor may travel considerable distance to source of ignition and flash back. May form explosive mixtures with air. Contact with Bromine pentafluoride is likely to cause fire or explosion. Ethanol ignites on contact with chromyl chloride. Ethanol ignites on contact with iodine heptafluoride gas. It ignites than explodes upon contact with nitrosyl perchlorate. Addition of platinum black catalyst caused ignition.

Remarks on Explosion Hazards :

Ethanol has an explosive reaction with the oxidized coating around potassium metal. Ethanol ignites and then explodes on contact with acetic anhydride + sodium hydrosulfate (ignites and may explode), disulfuric acid + nitric acid, phosphorous(III) oxide platinum, potassium-tert-butoxide+ acids. Ethanol forms explosive products in reaction with the following compound : ammonia + silver nitrate (forms silver nitride and silver fulminate), iodine + phosphorus (forms ethane iodide), magnesium perchlorate (forms ethyl perchlorate), mercuric nitrate, nitric acid + silver (forms silver fulminate) silver nitrate (forms ethyl nitrate) silver(I) oxide + ammonia or hydrazine (forms silver nitride and silver fulminate), sodium (evolves hydrogen gas). Sodium Hydrazide + alcohol can produce an explosion. Alcohols should not be mixed with mercuric nitrate, as explosive mercuric fulminate may be formed. May form explosive mixture with manganese perchlorate + 2,2-dimethoxypropane. Addition of alcohols to highly concentrate hydrogen peroxide forms powerful explosives. Explodes on contact with calcium hypochlorite. Vapor may explode if ignited in an enclosed area. Containers may explode when heated or involved in a fire.

Section 6: Accidental Release Measures**Small Spill:**

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

Large Spill:

Flammable

Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7: Handling and Storage**Precautions:**

Keep locked up.. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, acids, alkalis, moisture.

Storage:

Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame). Do not store above 23°C (73.4°F).

Section 8: Exposure Controls/Personal Protection**Engineering Controls:**

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection:

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits:

Ethyl alcohol

TWA: 1900 (mg/m³) from OSHA (PEL) [United States]

TWA: 1000 (ppm) from OSHA (PEL) [United States]

TWA: 1900 (mg/m³) from NIOSH [United States]

TWA: 1000 (ppm) from NIOSH [United States]

TWA: 1000 (ppm) [United Kingdom (UK)]

TWA: 1920 (mg/m³) [United Kingdom (UK)]

TWA: 1000 STEL: 1250 (ppm) [Canada]

Consult local authorities for acceptable exposure limits.

Section 9: Physical and Chemical Properties

Physical state and appearance: Liquid absorb at non woven layer.

Odor:

Alcohol like. Mild to strong. Like wine or whiskey, ethereal, vinous. Pleasant.

Taste: Burning. Pungent.

Molecular Weight: Not applicable.

Color: Clear Colorless.

pH (1% soln/water): Neutral.

Boiling Point: The lowest known value is 78.5°C (173.3°F) Weighted average: 79.58°C (175.2°F)

Melting Point: May start to solidify at -114.1°C (-173.4°F) based on data for: Ethyl alcohol

Critical Temperature: The lowest known value is 243°C (469.4°F)

Specific Gravity: Weighted average: 0.8 (Water = 1)

Vapor Pressure: The highest known value is 5.7 kPa (@ 20°C) Weighted average: 5.53 kPa (@ 20°C)

Vapor Density: The highest known value is 1.59 (Air = 1) Weighted average: 1.54 (Air = 1)

Volatility: Not available.

Odor Threshold: 100 ppm

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, methanol, diethyl ether, acetone.

Solubility:

Easily soluble in cold water, hot water, methanol, diethyl ether.
Soluble in acetone.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Incompatible materials, heat, sources of ignition.

Incompatibility with various substances: Reactive with oxidizing agents, acids, alkalis.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:

Ethanol rapidly absorbs moisture from the air.

Can react vigorously with oxidizers.

The following oxidants have been demonstrated to undergo vigorous/explosive reaction with ethanol: barium perchlorate, bromine pentafluoride, calcium hypochlorite, chloryl perchlorate, chromium trioxide, chromyl chloride, dioxygen difluoride, disulfuryl difluoride, fluorine nitrate, hydrogen peroxide, iodine heptafluoride, nitric acid nitrosyl perchlorate, perchloric acid permanganic acid, peroxydisulfuric acid, potassium dioxide, potassium perchlorate, potassium permanganate, ruthenium(VIII) oxide, silver perchlorate, silver peroxide, uranium hexafluoride, uranyl perchlorate.

Ethanol reacts violently/expodes with the following compounds: acetyl bromide (evolves hydrogen bromide) acetyl chloride, aluminum, sesquibromide ethylate, ammonium hydroxide & silver oxide, chlorate, chromic anhydride, cyanuric acid + water, dichloromethane + sulfuric acid + nitrate (or) nitrite, hydrogen peroxide + sulfuric acid, iodine + methanol + mercuric oxide, manganese perchlorate + 2,2-dimethoxy propane, perchlorates, permanganates + sulfuric acid, potassium superoxide, potassium tert-butoxide, silver & nitric acid, silver perchlorate, sodium hydrazide, sulfuric acid + sodium dichromate, tetrachlorosilane + water.

Ethanol is also incompatible with platinum, and sodium.

No really safe conditions exist under which ethyl alcohol and chlorine oxides can be handled.

Reacts vigorously with acetyl chloride

Special Remarks on Corrosivity: Not available.

Polymerization: Not available

Section 11: Toxicological Information

Routes of Entry: Eye contact. Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 3632 mg/kg (Mouse) Ethyl alcohol, 6300 mg/kg Chlorhexidine gluconate

Chronic Effects on Humans:

CARCINOGENIC EFFECTS: Classified PROVEN

Classified A4 (Not classifiable for human or animal.) by ACGIH

MUTAGENIC EFFECTS: Not available

TERATOGENIC EFFECTS: Classified PROVEN for human

DEVELOPMENTAL TOXICITY: Classified Development toxin [PROVEN]

Reproductive system/toxin/female, Reproductive system/toxin/male [POSSIBLE]

Other Toxic Effects on Humans:

Hazardous in case of skin contact (irritant), of inhalation.

Slightly hazardous in case of skin contact, very hazardous in case of ingestion

Special Remarks on Toxicity to Animals:

Lowest Published Dose/Conc:

LDL[Human] - Route: Oral; Dose: 1400 mg/kg

LDL[Human child] - Route: Oral; Dose: 2000 mg/kg

LDL[Rabbit] - Route: Skin; Dose: 20000 mg/kg

Special Remarks on Chronic Effects on Humans:

May affect genetic material (mutagenic)

Causes adverse reproductive effects and birth defects (teratogenic) , based on moderate to heavy consumption.

May cause cancer based on animal data.

Human: passes through the placenta, excreted in maternal milk.

Special Remarks on other Toxic Effects on Humans:

Acute potential health effects:

Skin: causes skin irritation

Eyes: causes eye irritation

Ingestion: May cause gastrointestinal tract irritation with nausea, vomiting, diarrhea, and alterations in gastric secretions. May affect behavior/central nervous system (central nervous system depression - amnesia, headache, muscular incoordination, excitation, mild euphoria, slurred speech, drowsiness, staggering gait, fatigue, changes in mood/personality, excessive talking, dizziness, ataxia, somnolence, coma/narcosis, hallucinations, distorted perceptions, general anesthetic), peripheral nervous system (spastic paralysis)vision (diplopia).

Moderately toxic and narcotic in high concentrations. May also affect metabolism, blood, liver, respiration (dyspnea), and endocrine system.

May affect respiratory tract, cardiovascular(cardiac arrhythmias, hypotension), and urinary systems.

Inhalation: May cause irritation of the respiratory tract and affect behavior/central nervous system with symptoms similar to ingestion.

Chronic Potential Health Effects:

Skin: Prolonged or repeated skin contact may casue dermatitis, an allergic reaction.

Ingestion: Prolonged or repeated ingestion will have similiar effects as acute ingestion. It may also affect the brain.

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are more toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations**Waste Disposal:**

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 3: Flammable liquid.

Identification : UNNA: 1170 PG: II

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):

CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).

CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC):

R11- Highly flammable.

S7- Keep container tightly closed.

S16- Keep away from sources of ignition - No smoking.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 3

Reactivity: 0

Personal Protection: h

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 3

Reactivity: 0

Specific hazard:

Protective Equipment:

Gloves.

Lab coat.

Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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