

SAFETY DATA SHEET

EPIMAX Quick Disinfection of Medical Instrument and Surfaces.

Version 1.1 SDS Number: 280732353621 Revision Date: 20/09/2021

SECTION 1. IDENTIFICATION

Product name:

EPIMAX Quick Disinfection of Medical Instrument and Surfaces.

Manufacturer or supplier's details

Company name of supplier: Emad pharmaceutical Company

Address: Razi industrial zone, Esfahan. Iran

Telephone: +98-3153323398

Recommended use of the chemical and restrictions on use

Recommended use: Disinfection of Medical Instrument and Surfaces.

Restrictions on use:

This is a product for disinfecting medical instruments and surfaces. While this material is not considered hazardous, this SDS contains valuable information critical to the safe handling and proper use of the product for workplace conditions as well as unusual and unintended exposures such as large spills. This SDS should be retained and available for employees and other users of this product. For specific intended-use guidance, please refer to the information provided on the package or instruction sheet.

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable liquids: Category 2

Eye irritation: Category 2A

GHS label elements

Hazard pictograms:



Signal word: Danger

Hazard statements: H225 Highly flammable liquid and vapour.
H319: Causes serious eye irritation.
H336: May cause drowsiness or dizziness.
H412: Harmful to aquatic life with long lasting effects.

Precautionary statements:

Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

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.
P337 + P313 If eye irritation persists: Get medical advice/ attention.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

In case of fire:

Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:

P403 + P235 Store in a well-ventilated place. Keep cool.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components	Chemical name CAS-No.	Concentration (%)
Isopropyl Alcohol	67-63-0	>= 40 < 45
Ethyl Alcohol	64-17-5	>= 25 < 30
Benzalkonium chloride	8001-54-5	>= 0.1 < 0.2

SECTION 4. FIRST AID MEASURES

General advice: In the case of accident or if you feel unwell, seek medical advice immediately.

When symptoms persist or in all cases of doubt seek medical advice.

If inhaled: If inhaled, remove to fresh air.

If symptoms persist, call a physician.

In case of skin contact: Wash immediately with plenty of soap and water.

In case of eye contact:

Bathe the eye with running water for 15 minutes.

Transfer to hospital for specialist examination.

If swallowed:

If swallowed, DO NOT induce vomiting.

Rinse mouth with water.

Obtain medical attention.

Most important symptoms and effects, both acute

and delayed:

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be pain and redness. The eyes may water profusely. There may be severe pain. The vision may become blurred. May cause permanent damage.

Ingestion: There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

Protection of first-aiders:

First Aid responders should pay attention to self-protection and use the recommended protective clothing.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media:

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media:

High volume water jet

Specific hazards during firefighting:

Do not use a solid water stream as it may scatter and spread fire.

Cool closed containers exposed to fire with water spray.

Flash back possible over considerable distance.

May form explosive mixtures in air.

Exposure to decomposition products may be a hazard to health.

Carbon oxides

Hazardous combustion products:

Carbon oxides

Specific extinguishing methods:

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Use water spray to cool unopened containers.

Further information:

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for firefighters:

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions,
protective equipment and
emergency procedures :

Personal precautions: Mark out the contaminated area with signs and prevent access to unauthorised personnel. Do not attempt to take action without suitable protective clothing - see section 8 of SDS. Turn leaking containers leak-side up to prevent the escape of liquid.

Environmental precau-
tions :

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding.

Methods and materials
for containment and
cleaning up :

Clean-up procedures: Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling:

Handling requirements: Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area. Avoid the formation or spread of mists in the air.

Conditions for safe storage,
including any incompatibilities:

Storage conditions: Store in a cool, well ventilated area. Keep container tightly closed.

Specific end use(s):
products

Specific end use(s): PC8: Biocidal

(e.g. Disinfectants, pest control).

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Isopropyl Alcohol	67-63-0	TWA	200 ppm	ACGIH
		STEL	400 ppm	ACGIH
		TWA	400 ppm 980 mg/m ³	NIOSH REL
		ST	500 ppm 1,225 mg/m ³	NIOSH REL
		TWA	400 ppm 980 mg/m ³	OSHA Z-1
Ethyl Alcohol	64-17-5	TWA	1,000 ppm 1,900 mg/m ³	NIOSH REL
		TWA	1,000 ppm 1,900 mg/m ³	OSHA Z-1
		STEL	1,000 ppm	ACGIH
Benzalkonium chloride	8001-54-5	No additional information available		

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Isopropyl Alcohol	67-63-0	Acetone	Urine	End of shift at end of workweek	40 mg/l	ACGIH BEI
Ethyl Alcohol	64-17-5			15 minutes	STEL: 1000 ppm	ACGIH TLV
				8 hours.	TWA: 1000 ppm	OSHA PEL 1989

				8 hours	TWA: 1900 mg/m ³	OSHA PEL 1989
				10 hours	TWA: 1000 ppm	
				10 hours	TWA: 1900 mg/m ³	NIOSH REL
				8 hours	TWA: 1000 ppm	OSHA PEL
				8 hours	TWA: 1900 mg/m ³	
Benzalkonium chloride	8001-54-5	No available data				

Personal protective equipment

Respiratory protection:

No personal respiratory protective equipment normally required.

Hand protection

Remarks:

No special protective equipment required.

Eye protection:

Wear face-shield and protective suit for abnormal processing problems.

Skin and body protection:

No special protective equipment required.

Protective measures:
and

Choose body protection in relation to its type, to the concentration amount of dangerous substances, and to the specific work-place. Ensure that eye flushing systems and safety showers are located close to the working place.

Hygiene

Measures: Handle in accordance with good industrial hygiene and safety practice.

Avoid contact with eyes.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	liquid
Colour:	clear, colourless
Odour:	alcohol-like
Odour Threshold:	No data available
pH:	6 - 8, (20 °C)
Melting point/ freezing point:	No data available
Initial boiling point and boiling range:	79 °C
Evaporation rate:	No data available
Flammability (solid, gas):	Not applicable
Flammability (liquids):	No data available
Upper explosion limit:	No data available
Lower explosion limit:	No data available

Vapour pressure:	No data available
Relative vapour density:	No data available
Density:	0.8-0.9 g/cm ³
Solubility(ies) Water solubility:	soluble
Partition coefficient: n-octanol/water:	Not applicable
Auto-ignition temperature:	No data available
Thermal decomposition:	The substance or mixture is not classified self-reactive.
Viscosity Viscosity, kinematic:	1-0.85 cSt (20 °C -25°C)
Explosive properties:	Not explosive
Oxidizing properties:	The substance or mixture is not classified as oxidizing.

SECTION 10. STABILITY AND REACTIVITY

Reactivity: or	Reactivity: Stable under recommended transport storage conditions.
Chemical stability:	Stable under normal conditions.
Possibility of hazardous	

Reactions: conditions. conditions	Hazardous reactions: Hazardous reactions will not occur under normal transport or storage Decomposition may occur on exposure to or materials listed below.
Conditions to avoid:	Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources. Avoid static charge accumulation and discharge
Incompatible materials: Hazardous decomposition products: carbon dioxide and	Materials to avoid: Strong oxidising agents. Strong acids. Ignition and burning can release carbon monoxide, noncombusted hydrocarbons (smoke).

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation

Eye contact

Skin contact

Acute toxicity

Not classified based on available information.

Components:

Ethyl Alcohol:

Acute oral toxicity:

LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity:

LC50 (Rat): 124.7 mg/l

Exposure time: 4 h

Test atmosphere: vapour

Isopropyl Alcohol:

Acute oral toxicity: LD50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity: LC50 (Rat): 72.6 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Acute dermal toxicity: LD50 (Rat): > 5,000 mg/kg

Benzalkonium chloride:

Acute oral toxicity: LD50(rat) = 240 mg/kg LD50 Rat
Acute inhalation toxicity: No data available.
Acute dermal toxicity: LD50(rat) = 1420 mg/kg LD50

Skin corrosion/irritation

Not classified based on available information.

Components:**Ethyl Alcohol:**

Species: Rabbit
Method: OECD Test Guideline 404
Result: No skin irritation

Isopropyl Alcohol:

Species: Rabbit
Result: No skin irritation

Benzalkonium chloride:

Harmful in contact with skin. Causes severe irritation and burns. May cause allergic skin reaction.

Serious eye damage/eye irritation

Causes serious eye irritation.

Components:**Ethyl Alcohol:**

Species: Rabbit
Result: Irritation to eyes, reversing within 21 days

Method: OECD Test Guideline 405

Isopropyl Alcohol:

Species: Rabbit

Result: Irritation to eyes, reversing within 21 days

Benzalkonium chloride:

Causes severe eye irritation and possible burns.

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

Components:

Ethyl Alcohol:

Test Type: Local lymph node assay (LLNA)

Exposure routes: Skin contact

Species: Mouse

Result: negative

Isopropyl Alcohol:

Test Type: Buehler Test

Exposure routes: Skin contact

Species: Guinea pig

Method: OECD Test Guideline 406

Result: negative

Benzalkonium chloride:

No data available.

Germ cell mutagenicity

Not classified based on available information.

Components:

Ethyl Alcohol:

Genotoxicity in vitro:

Test Type: In vitro mammalian cell gene mutation test

Result: negative

Genotoxicity in vivo:

Test Type: Rodent dominant lethal test
(germ cell) (in vivo)
Test species: Mouse
Application Route: Ingestion
Result: negative

Isopropyl Alcohol:

Genotoxicity in vitro:

Test Type: Bacterial reverse mutation assay
(AMES)
Result: negative

Genotoxicity in vivo:

Test Type: Mammalian erythrocyte
micronucleus test (in vivo cytogenetic assay)
Test species: Mouse
Application Route: Intraperitoneal injection
Result: negative

Benzalkonium chloride:

No data available.

Carcinogenicity

Not classified based on available information.

Components:

Ethyl Alcohol:

NTP

Naphthalene (CAS-No.: 91-20-3)

Benzene (CAS-No.: 71-43-2)

IARC

Gasoline, natural; Low boiling point
naphtha (CAS-No.: 8006-61-9)

Naphthalene (CAS-No.: 91-20-3)

Benzene (CAS-No.: 71-43-2)

Ethylbenzene (CAS-No.: 100-41-4)

OSHA

Benzene (CAS-No.: 71-43-2)

CA Prop 65

WARNING! This product contains a

chemical known to the State of California to cause birth defects or other reproductive harm.

Toluene (CAS-No.: 108-88-3)

Benzene (CAS-No.: 71-43-2)

Isopropyl Alcohol:

Species: Rat

Application Route: inhalation (vapour)

Exposure time: 104 weeks

Method: OECD Test Guideline 451

Result: negative

IARC

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Benzalkonium chloride:

Not considered carcinogenic.

Reproductive toxicity

Not classified based on available information.

Components:

Ethyl Alcohol:

Effects on fertility:

Test Type: Two-generation reproduction toxicity study

Species: Mouse

Application Route: Ingestion
Method: OECD Test Guideline 416
Result: negative

Isopropyl Alcohol:

Effects on fertility:

Test Type: Two-generation reproduction toxicity study

Species: Rat

Application Route: Ingestion

Result: negative

Effects on foetal development:

Test Type: Embryo-foetal development

Species: Rat

Application Route: Ingestion

Result: negative

Benzalkonium chloride:

No data is available

STOT - single exposure

Not classified based on available information.

Components:

Isopropyl Alcohol:

Assessment: May cause drowsiness or dizziness.

STOT - repeated exposure

Not classified based on available information.

Benzalkonium chloride:

No information available.

Repeated dose toxicity

Components:

Ethyl Alcohol:

Species: Rat

NOAEL: 2,400 mg/kg
Application Route: Ingestion
Exposure time: 2 y

Isopropyl Alcohol:

Species: Rat
NOAEL: 5000 ppm
Application Route: inhalation (vapour)
Exposure time: 104 w
Method: OECD Test Guideline 413

Benzalkonium chloride:

No information available.

Aspiration toxicity

Not classified based on available information.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Ethyl Alcohol:

Toxicity to fish: LC50 (Pimephales promelas (fathead minnow)): > 1,000 mg/l

Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates:

EC50 (Daphnia magna (Water flea)): > 1,000 mg/l

Exposure time: 48 h

Toxicity to algae:

EC50 (Chlorella vulgaris (Fresh water algae)): 275 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Toxicity to daphnia
and other aquatic
invertebrates
(Chronic toxicity):

NOEC (Daphnia magna (Water flea)): 9.6
mg/l
Exposure time: 9 d

Toxicity to bacteria:

EC50 (Photobacterium phosphoreum): 32.1
mg/l
Exposure time: 0.25 h

Isopropyl Alcohol:

Toxicity to fish:

LC50 (Pimephales promelas (fathead
minnow)): 10,000 mg/l
Exposure time: 96 h

Toxicity to daphnia
and other aquatic
invertebrates:

EC50 (Daphnia magna (Water flea)): > 10,000
mg/l
Exposure time: 24 h

Toxicity to bacteria:

EC50 (Pseudomonas putida): > 1,050 mg/l
Exposure time: 16 h

Isopropyl Alcohol:

Toxicity to fish:

LC50 (Pimephales promelas (fathead
minnow)): 10,000 mg/l
Exposure time: 96 h

Toxicity to daphnia
and other aquatic
invertebrates:

EC50 (Daphnia magna (Water flea)): > 10,000
mg/l
Exposure time: 24 h

Toxicity to bacteria:

EC50 (Pseudomonas putida): > 1,050 mg/l
Exposure time: 16 h

Benzalkonium chloride:

Toxicity to fish

0.223 - 0.46 mg/L LC50 Lepomis
macrochirus 96 h static 1 0.823 - 1.61
mg/L LC50 Oncorhynchus mykiss 96 h
static 1 2.4 mg/L LC50 Oryzias latipes
96 h semi-static 1 1.3 mg/L LC50
Poecilia reticulata 96 h semi-static 1

Persistence and degradability

Components:

Ethyl Alcohol:

Biodegradability:

Result: Readily biodegradable.

Biodegradation: 84 %

Exposure time: 20 d

Isopropyl Alcohol:

Biodegradability:

Result: rapidly degradable

Benzalkonium chloride:

No information available

Bioaccumulative potential

Components:

Ethyl Alcohol:

Partition coefficient: n-
octanol/water

log Pow: -0.35

Isopropyl Alcohol:

Partition coefficient: n-
octanol/water:

log Pow: 0.05

Benzalkonium chloride:

No information available

Mobility in soil

No data available

Other adverse effects

No data available

Product:

Regulation

40 CFR Protection of Environment; Part 82
Protection of Stratospheric Ozone - CAA Section
602 Class I Substances

Remarks

This product neither contains, nor was
manufactured with a Class I or Class II ODS as
defined by the U.S. Clean Air Act Section 602 (40
CFR 82, Subpt. A, App.A + B).

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues:

Dispose of in accordance with local regulations.

Contaminated packaging:

Dispose of as unused product.

Empty containers should be taken to an approved
waste handling site for recycling or disposal.

SECTION 14. TRANSPORT INFORMATION**International Regulation****IATA-DGR**

UN/ID No.:

UN 1987

Proper shipping name:
(Ethanol, Propan-2-ol)

Alcohols, n.o.s.

Class:

3

Packing group:

II

Packing instruction
(cargo aircraft):

364

Packing instruction
(passenger aircraft): 353
Remarks: Complies with Section 3.3.3.1

IMDG-Code

UN number: UN 1987
Proper shipping name: ALCOHOLS, N.O.S.
(Ethanol, Propan-2-ol)
Class: 3
Packing group: II
Labels: 3
EmS Code: F-E, S-D
Marine pollutant: no
Remarks: Complies with Chapter 2.3.2.2

National Regulations

49 CFR

UN/ID/NA number: UN 1987
Proper shipping name: Alcohols, n.o.s.
Class: 3
Packing group: II
ERG Code: 127
Marine pollutant: no
Remarks: Complies with 49 CFR 173.121(b)

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

SARA 311/312 Hazards: Fire Hazard
Acute Health Hazard

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313: The following components are subject to reporting levels established by SARA Title III, Section 313:

Isopropyl Alcohol

67-63-0

4.2525 %

Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489):

Ethyl Alcohol

64-17-5

81.4464 %

Isopropyl Alcohol

67-63-0

4.2525 %

Benzalkonium chloride:

8001-54-5

No information available

This product does not contain any VOC exemptions listed under the U.S. Clean Air Act Section 450.

Clean Water Act

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm. **Proposition 65.**

The components of this product are reported in the following inventories:

TSCA: On TSCA Inventory

AICS: On the inventory, or in compliance with the inventory

DSL: All components of this product are on the Canadian DSL.

ENCS: On the inventory, or in compliance with the inventory

ISHL: On the inventory, or in compliance with the inventory
 KECI: On the inventory, or in compliance with the inventory
 PICCS: On the inventory, or in compliance with the inventory
 IECSC: On the inventory, or in compliance with the inventory
 NZIoC: On the inventory, or in compliance with the inventory

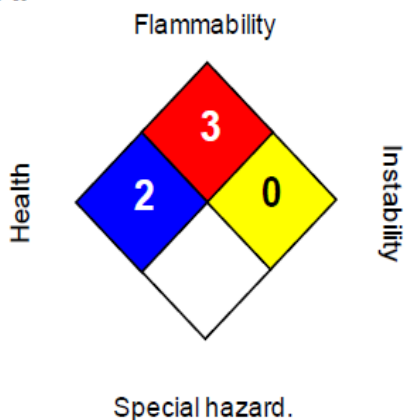
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	2
FLAMMABILITY	3
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
 2 = Moderate, 3 = High
 4 = Extreme, * = Chronic

Revision Date: 20/09/2021

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.