



MATERIAL SAFETY DATA SHEET

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Revised edition no : 01

P-829 SURGICAL SPIRIT

Effective Date: 29.3.2023

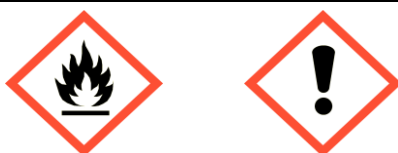
1 Identification of the Product and the company

Chemical Name : Surgical Spirit
Type of product chemical family : N/A
Use : use for injection
Producer : TLC-KOYA CHEMICALS MANUFACTURING SDN BHD
No.22 & 23, Jalan Maju 1,
Cemerlang Industrial Estate,
81800 Ulu Tiram, Johor, Malaysia.
Tel: 607-8675798 Fax: 607-8675799
Website: www.koyachemicals.com Email: admin@koyachemicals.com

Emergency phone nr : See producer
HS Code : 34022099

2 Hazard Identification

Hazard Pictograms :



Signal Word : Danger

Classification of the Mixture

Flammable liquid Category 2

Serious eye damage / eye irritation, Category 2

Specific target organ toxicity - single exposure: narcotic effect, Category 3

Hazard Statements H225: Highly flammable liquid and vapour

H319: Cause serious eye irritation

H336: May cause drowsiness or dizziness

Precaution Statements : 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.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P303 + P361 IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing.
+ P353 Rinse skin with water/shower.
P304+P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses,
+ P338 if present and easy to do. Continue rinsing.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P370 + P378 In case of fire: Use suitable fire extinguisher media for extinction.
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/
international regulation.

3 Composition / Information on Ingredients

Hazardous ingredients : Ethyl Alcohol 75%
CAS NO.64-17-5

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4 First Aid Measures

4.1 Description of Forst Aid Measures

- Inhalation : Remove to fresh air.
Transport to the nearest medical facility if breathing becomes difficult or respiratory irritation persists.
- Skin Contact : Remove contaminated clothing and shoes.
Flush skin with large amount of water for at least 15 minutes. Discard/ decontaminate cloth and shoe before reuse.
- Eye Contact : Immediately flush eyes with large amounts of water for at least 15 minutes while holding eyelids open.
Transport to the nearest medical facility for additional treatment.
- Ingestion : Include vomiting: drink two glasses of water
Do not induce vomiting: transport to nearest medical facility for additional treatment.
If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

4.2 Most important Symptoms and Effects, both Acute and Delayed

- Risk : Irritant effect, drowsiness, dizziness, narcosis, nausea, vomiting, stomach/ intestinal disorders, headache, salication, coma, corneal clouding.

4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed

- Treatment : For specialist advice physicians should contact the National Poison Centre.

5 Fire-Fighting Measures

5.1 Extinguishing media

- Suitable Extinguishing media : Dry powder
: Carbon Dioxide (CO₂)
: Water spray
: Foam
- Unsuitable Extinguishing media : Do not use water in a jet.

5.2 Special Hazards Arising from the Substance or Mixture

- Hazardous Combustion Product : Carbon monoxide
: Carbon dioxide
- Specific Hazards during Fire : Combustible naterial
: Vapours are heavier than air and may spread along floor.
: Forms explosive mixture with air at ambient temperature.
: Pay attention to flashback.
: Possible development of hazardous combustion gases or vapour.

5.3 Advice for Firefighters

- Special protective Equipment** : Wear suitable full protective clothing
: Wear positive pressure breathing apparatus.
- Further Informaion** : Approach fire from upwind to avoid hazardous vapors and toxic decomposition product.

6 Accidental Release measures

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

6.1.1 For Non-emergency Personnel

- Protective Equipment** : Wear suitable protective equipment (See Section 8)
- Emergency Procedures** : Evacuate the area immediately
: Isolate the hazard area
: Avoid breathing vapors or mists. Keep people away from and upwind of spill/leak.
: Keep away from heat and sources of ignition.
: Use grounded, explosion-proof equipment.
: Increase ventilation to area or move leaking container to a well-ventilated and secure area.

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6.1.2 For Emergency responders

Protective Equipment

- : Use solvent-resistant protective clothing.
- : Use respirator with AX filter or self-contained breathing apparatus.
- : Use butyl-rubber gloves.
- : Use safety glasses with side-shield.
- : Use safety shoes.

6.2 Environmental Precautions

Environmental Precautions

- : Attempt to stop leakage without personal risk.
- : Should not be released into the environment.
- : Prevent product from entering drains/subsoil/soil/drains/surface waters/groundwater.
- : Local authorities should be advised if significant spillages.
- : Cannot be contained.
- : Observe the risk of explosion.

6.3 Methods And Materials for Containment And Cleaning Up

6.3.1 For Containment

Small Spillage and Leakage
(<1 Drum)

- : Stop the source of spill or leak.
- : Use bunds to contain the spill.
- : Cover the drain.

Large Spillage and Leakage
(>1 Drum)

- : Stop the source of spill or leak if possible.
- : Use bunds or flood barriers to contain the spill.
- : Cover the drain.

6.3.2 For Cleaning Up

Small Spillage and Leakage
(<1 Drum)

- : Transfer by mechanical means to a labelled, sealable container for product recovery or safe disposal.
- : Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely.
- : Remove contaminated soil and dispose of safely.

Large Spillage and Leakage
(>1 Drum)

- : Transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal.
- : Do not flush away residues with water.
- : Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely.
- : Remove contaminated soil and dispose of safely.

6.3.3 Other Information

Additional Advice

- : Notify authorities if any exposure to the general public or the environment occurs or is likely to occur. Local authorities should be advised if significant spillages cannot be contained.

6.4 Reference to Other Sections

Section 8

- : Personal protective equipment.

Section 13

- : Disposal.

7 Handling and Storage

7.1 Precautions for Safe Handling

Advice On Safe Handling

- : Ensure adequate ventilation.
- : Avoid inhaling vapours / mists.
- : Avoid contact with skin, eyes and clothing.
- : Wash hands before breaks and immediately after handling the product.
- ; When using do not eat, drink or smoke.
- : Easy access to emergency shower and eye wash facility.

Advice On Protection

Against Fire And Explosion

- : Remove ignition source.
- : No Smoking.
- : Extinguish any naked flame.
- : Avoid sparks.
- : Avoid splash filling.

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- : Take precautionary measures against static discharges.
- : DO NOT use compressed air for filling, discharging, or handling operations.

7.2 Conditions for Safe Storage, Including Any Incompatibilities

Requirements For Storage

Areas And Containers

- : Keep containers tightly closed in a cool, well-ventilated place.
- : Keep in a dry place.
- : Protect from sunlight.
- : Keep product and empty container away from heat and sources of ignition.
- : Locate bulk storage outdoors.
- : Bulk storage tanks should be diked (bounded).

Suitable Storage Materials

- : For containers, or container linings use mild steel, stainless steel.
- : For container paints, use epoxy paint, zinc silicate paint. Stainless steel.
- : Keep away from incompatible materials. (See chapter 10)

Advice on Common Storage

7.3 Specific End Uses

Recommendations

- : Solvents.

8 Exposure controls / personal protection

8.1 Control Parameter

8.1.1 Occupational Exposure Limits

- OSHA Benzene TWA 1 ppm, STEL 5 ppm
- OSHA_ACT 0.5 ppm
- OSHA Z1 Ethanol; Ethyl alcohol 64-17-5 PEL 1,000 ppm 1,900 mg/m3
Xylene 1330-20-7 PEL 100 ppm 435 mg/m3
- ACGIH Ethanol; ethyl alcohol 64-17-5 TWA 1,000 ppm
Toluene TWA 50 ppm, Xylene TWA 100 ppm, STEL 150 ppm
Benzene TWA 0.5 ppm, STEL 2.5 ppm

8.2 Exposure Control

8.2.1 Appropriate Engineering Controls

- Engineering Measures : The level of protection and types of controls necessary will vary depending upon potential exposure conditions.
- : Select controls based on a risk assessment of local circumstances.
- : Provide adequate ventilation in storage areas.
- : Use sealed systems as far as possible.
- : Adequate explosion-proof ventilation to control airborne concentrations below the exposure guidelines/limits.
- : Local exhaust ventilation is recommended.
- : Firewater monitors and deluge systems are recommended.
- : Eye washes and showers for emergency use.

8.2.2 Personal Protective Equipment

Eye and Face Protection

- : Chemical splash goggles.

Skin and Body Protection

- : Use protective clothing which is chemical resistant to this material.
- : Safety shoes and boots should also be chemical resistant.

Hand Protection

- : Protective gloves.
- : Always seek advice from glove suppliers.

Respiratory Protection

- : Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN149.
- : Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
- : Not applicable.

Thermal Hazards

8.2.3 Environment Exposure Controls

General advice

- : Attempt to stop leakage without personal risk.
- : Should not be released into the environment.
- : Prevent product from entering drains.
- : Local authorities should be advised if significant spillages cannot be contained.
- : Observe the risk of explosion.

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9 Physical and chemical properties**9.1 Information on Basic Physical and Chemical Properties**

Appearance	: Clear colorless liquid
Odour	: Mild alcohol
Odour Threshold	: Not available
pH	: Not applicable
Melting point/Freezing	: -114°C (for 100% ethyl alcohol)
Initial Boiling Point and Boiling Range	: 78°C (for 100% ethyl alcohol)
Flash point	: 14°C (closed cup)
Evaporation Rate	: Data not available
Flammability (Solid,Gas)	: Flammable
Vapour Pressure	: 6.4kPa at 20°C (for 100% ethanol)
Vapour Density	: 1.6 (air=1)
Relative Density	: 0.8mg/L
Auto-ignition Temperature	: 363°C (ethyl alcohol)
Decomposition Temperature	: Will evaporate or boil and possibly ignite before decomposition occurs.
Viscosity	: Not applicable
Explosive Properties	: Not explosive
Oxidizing Properties	: The substance or mixture is not classified as oxidizing.

10 Stability and reactivity

Reactivity	: No data available.
Chemical Stability	: Stable under normal conditions of use.
Possibility of Hazardous Reactions	: None known
Condition to avoid	: Open flames,sparks,static discharge,heat and other ignition sources. : Prolonged exposure to sunlight.
Incompatible Materials	: Nitric-sulfuric mixture. : Chromc acid : Potassium permanganate. : Peroxides : Halogenated hydrocarbon : Nitric acid : Strong oxidizing agents
Hazardous Decomposition	: No decomposition.Can be distilled at normal pressure without decomposition.

11 Toxicological information**11.1 Information on Toxicology Effects**

Acute Toxicity	: Oral LD ₅₀ rat : 10470 mg/kg : Dermal LD ₅₀ rat : >15800mg/kg : Inhalation LC ₅₀ rat : >51mg/L/4h
Skin Corrosion / Irritation	: Not classified
Serious Eye Damage / Irritation	: Serious eye irritation
Respiratory or Skin Sensitization	: Not classified
Germ Cell Mutagenicity	: No data available.
Carcinogenicity	: Not carcinogenic.
Reproductive Toxicity	: No effects.
Summary of Evaluation of the CMR Properties	: No data available.
STOT - Single Exposure	: Respiratory system lungs,brain,nervous system,liver,eyes and skin.
STOT - Repeated Exposure	: Not classified.
Aspiration Hazard	: Not classified as aspiration hazard.

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12 Ecological information**12.1 Toxicity****12.1.1 Acute (Short-term) Toxicity**

Fish	: No data available.
Crustacean	: No data available.
Algae / Aquatic Plants	: No data available.
Others Organisms	: No data available.

12.1.2 Chronic (Long-term) Toxicity

Fish	: No data available.
Crustacean	: No data available.
Algae / Aquatic Plants	: No data available.
Others Organisms	: No data available.

12.2 Persistence and Degradability

Abiotic Degradation	: No data available.
Physical- and Photo-Chemical Elimination	: No data available.
Biodegradation	: Ready Biodegradable.

12.3 Bioaccumulative Potential

Partition Coefficient octane / Water	: No data available.
Bioconcentration Factor	: No data available.

12.4 Mobility in Soil

Know or Predicted Distribution to Environmental Compartments	: No data available.
Surface Tension	: No data available.
Absorption / Desorption	: No data available.

12.5 Results of PBT and vPvB Assessment

PBT	: Not a PBT substance.
vPvB	: Not a vPvB substance.

12.6 Other Adverse Effects

Environmental Adverse Effects	: No data available.
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12.7 Addition Information

Additional Ecological Information	: Discharge into environment must be avoided.
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13 Disposal Considerations**13.1 Waste Treatment Methods**

Material Disposal	: Recover or recycle if possible. : Dispose as hazardous waste in compliance with local and national regulations. : Do not dispose together with household waste. : Do not dispose into the environment, in drains or in water courses. : Waste product should not be allowed to contaminate soil or water. : Waste codes / waste designations in accordance with, 1. Environmental Quality Act 1974, Malaysia: SW 322 (Waste of non-halogenated organic solvents). 2. Environmental Public Health Act, Singapore: Listed as organic compounds not containing Halogen.
Container Disposal	: Recover or recycle or reuse if possible. : Dispose as hazardous waste in compliance with local and national regulations. : Do not dispose together with household waste. : Drain container thoroughly. : After draining, vent in a safe place away from sparks and fire. : Do not puncture, cut or weld unclean drums. : Waste codes / waste designations in accordance with, 1. Environmental Quality Act 1974, Malaysia: SW 409 (Disposed containers, bags or equipment contaminated with chemicals, pesticides, mineral oil or scheduled waste). 2. Environmental Public Health Act, Singapore: Not listed.

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Waste Treatment Relevant : Contact a licenced professional waste disposal service to dispose of this material.
Information

Sewage Disposal Relevant : Do not release to sewers.
Information

Other Disposal : Local regulations may be more stringent than regional or national requirements and must
Recommendations be complied with.

14 Transport information**14.1 UN Number**

Road (ADR) : 1987
Rail (RID) : 1987
Sea (IMDG) : 1987
Air (IATA) : 1987

14.2 UN Proper Shipping Name

Road (ADR) : Alcohols,n.o.s (ethanol,ipa)
Rail (RID) : Alcohols,n.o.s (ethanol,ipa)
Sea (IMDG) : Alcohols,n.o.s (ethanol,ipa)
Air (IATA) : Alcohols,n.o.s (ethanol,ipa)

14.3 Transport Hazards Class

Road (ADR) : 3
Rail (RID) : 3
Sea (IMDG) : 3
Air (IATA) : 3

14.4 Packing Group

Road (ADR) : II
Rail (RID) : II
Sea (IMDG) : II
Air (IATA) : II

14.5 Environmental Hazardous

Road (ADR) : Not environmentally hazardous.
Rail (RID) : Not environmentally hazardous.
Sea (IMDG) : Not marine pollutant.
Air (IATA) : Not environmentally hazardous.

14.6 Special Precaution for Use

Road (ADR) : No data available.
Rail (RID) : No data available.
Sea (IMDG) : No data available.
Air (IATA) : No data available.

14.7 Transport in Bulk According to Annex II of MARPOL 73/78 and IBC CODE

Pollution Category : Z

15 Regulatory Information**15.1 Safety, Health and Environmental Regulation / Legislation Specific for the Substance or Mixture.**

EU Regulation and : Control of Major Accident Hazards Involving Hazardous Substance, Directive 96/82/EC
Legislation

Highly flammable
Quantity 1: 5,000 tonnes
Quantity 2: 50,000 tonnes

Malaysia Regulation and : Occupational Safety and Health Act, 1994
Legislation

Legislation : Environmental Quality Act, 1974

Singapore Regulation and : Workplace Safety and Health Act

Legislation : The Environmental Protection and Management Act

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Chemical Inventory Status

EINECS (EU) : Listed
TSCA (US) : Listed
DSL (Canada) : Listed
IECSC (China) : Listed
ENCS (Japan) : Listed
KECI (Korea) : Listed
NECI (Taiwan) : Listed
AICS (Australia) : Listed
NZIoC (New Zealand) : Listed
PICCS (Philippines) : Listed

15.2 Chemical Safety Assessment

No chemical Safety Assessment has been carried for this substance / mixture by the supplier.

16 Other information

Abbreviations : DT₅₀ Dissipation half-life of parent compound
: EC₅₀ Half maximal effective concentration
: LC₅₀ Lethal concentration and time
: LD₅₀ Median lethal dose

References : Guidance on The Compilation of Safety Data Sheets, Version 1.1, December 2011, European Chemical Agency
: Globally Harmonized System of Classification and Labelling of Chemicals (GHS), Third Edition, 2009, United Nation.

Training Advice : Provide adequate information, instruction and training for operator.

Disclaimer : The information, data and recommendations set forth herein (the information) are presented in good faith and to the best of our knowledge are believed to be correct as of the date hereof. However, neither the above-named company / manufacturer, nor any of its suppliers, assumed liability whatsoever for the completeness or accuracy of the information contained herein. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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