

Safety Data Sheets (SDSs)

Client	Changzhou Anyida Power Technology Co.,Ltd
Add. of Client	No.60, Tianshan Road, Xinbei District, Changzhou, JiangSu
Description	Lithium Manganese Dioxide Button Battery
Model /Type	CR2450
Trade Name	N/A
Manufacturer	Changzhou Anyida Power Technology Co.,Ltd
Add. of Manufacturer	No.60, Tianshan Road, Xinbei District, Changzhou, JiangSu
Nominal Voltage	3.0V, 600mAh
Weight of Lithium in grams	0.18g
Date of Receipt	2021-04-07
	ZILIA WERCS
Laboratory	Dongguan ZRLK Testing Technology Co., Ltd.
Address	Building D, No.2, Jinyuyuan Mansion, No.18, Industrial West Road, Songshan Lake High-tech Industrial Development Zone, Dongguan, Guangdong, China
Approved Signatory	Maggie.Gao Ailis.Ma Lahm Peng Lahm Peng
Inspected by	Ailis.Ma Ailis Ma
Censored by	Lahm Peng Lahm Peng



1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product name: Lithium Manganese Dioxide Button Battery

Model: CR2450

Other means of identification

Synonyms:none

Recommended use of the chemical and restrictions on use

Recommended Use:Used in portabl electronic equipments;

Uses advidsed against:

a) Do not dismantle, open or shred batteries.

b) Do not expose batteries to heat or fire. Avoid storage in direct sunlight.

c) Do not short-circuit battery. Do not store batteries haphazardly in a box or drawer where they may short-

circuit each other or be short-circuited by other metal objects.

d) Do not remove a battery from its original packaging until required for use.

e) Do not subject batteries to mechanical shock.

f) In the event of a cell leaking, do not allow the liquid to come in contact with the skin or eyes. If contact has been made, wash the affected area with copious amounts of water and seek medical advice.

g) Observe the plus (+) and minus (-) marks on the cell, battery and equipment and ensure correct use.

h) Do not use any cell or battery which is not designed for use with the equipment.

i) Do not mix cells of different manufacture, capacity, size or type within a device.

j) Battery usage by children should be supervised.

k) Seek medical advice immediately if a cell or a battery has been swallowed.

1) Always purchase the battery recommended by the device manufacturer for the equipment.

m) Keep cells and batteries clean and dry.

n) After extended periods of storage, it may be necessary to charge and discharge the cells or batteries several times to obtain maximum performance.

o) Use only the cell or battery in the application for which it was intended.

p) When possible, remove the battery from the equipment when not in use.

q) Dispose of properly.

Details of the supplier of the safety data sheet:

Supplier Name: Changzhou Anyida Power Technology Co.,Ltd

Address: No.60, Tianshan Road, Xinbei District, Changzhou, JiangSu

Telephone number of the supplier: 0086-0519-83270474

Postcode: 213000

E-mail address: marketing@suyucell.cn

Emergency telephone number

Company Emergency Phone Number: 0086-0519-83270474

2. HAZARDS IDENTIFICATION



Classification

Acute toxicity - Dermal	Category 3
Serious eye damage/eye irritation	Category 2A
Carcinogenicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 1

GHS Label elements, including precautionary statements

Danger

Hazard statements

Toxic in contact with skin Causes serious eye irritation

Suspected of causing cancer

Causes damage to organs through prolonged or repeated exposure



Precautionary statements-Prevention

Obtain special instructions before use Do not handle until all safety precautions have been read and understood Wear protective gloves/protective clothing/eye protection/face protection Wash face, hands and any exposed skin thoroughly after handling Do not breathe dust/fume/gas/mist/vapors/spray Do not eat, drink or smoke when using this product

Precautionary Statements - Response

If exposed or concerned: Get medical advice/attention Specific treatment (see supplemental first aid instructions on this label)

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention

Skin

IF ON SKIN: Wash with plenty of water and soap



Call a POISON CENTER or doctor if you feel unwell Take off immediately all contaminated clothing and wash it before reuse

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other information

harmful if swallowed. Very toxic to aquatic life with long lasting effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical characterization: Mixtures

Description:

Product: Consisting of the following components.

Common Chemical Name	Concentration	CAS
	(%)	Number
Lithium	2.5	7439-93-2
Propylene Carbonate	4	108-32-7
Manganese Dioxide	40	1313-13-9
Stainless steel	50.5	12597-68-1
Perchloric acid, lithium salt	1	7791-03-9
Graphite	2	7782-42-5

Note: CAS number is Chemical Abstract Service Registry Number.

N/A=Not apply.

4. FIRST-AID MEASURES

First aid measures

Eye Contact Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.

Skin Contact Remove contaminated clothing and shoes. Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.

Inhalation Move to fresh air. If symptoms persist, call a physician.

Ingestion Do NOT induce vomiting. Drink plenty of water. If symptoms persist, call a physician.

Most important symptoms and effects, both acute and delayed

Swallowing Do not induce vomiting. Get medical attention.



Most Important Symptoms/Effects No information available.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

CO2, dry chemical powder, water spray.

Unsuitable Extinguishing Media:No information available.

Specific Hazards Arising from the Chemical

Formation of toxic gases is possible during heating or in case of fire.

In case of fire, the following can be released:

Carbon monoxide(CO)

Carbon dioxide

Other irritating and toxic gases.

Hazardous Combustion Products

Carbon oxides.

Explosion Data

Sensitivity to Mechanical Impact No

Sensitivity to Static Discharge No

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. For example: Wear self-contained respiratory protective device. Wear suitable protective clothing and eye/face protection.

Special hazards arising from the substance or mixture:

Battery may burst and release hazardus decomposition products when exposed to a fire situation. Lithium ion batteries contain flammable electrolyte that may vent, ignite and produce sparks when subjected to high temperature(>150°C), When damaged or abused(e.g. mechanical damage or electrical overcharging); may burn rapidly with flare-burning effect; may ignite other batteries in clothes proximity.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Avoid contact with eyes.

Refer to section 8 for personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition.

Evacuate personnel to safe areas.

Environmental precautions

Environmental Precautions Refer to protective measures listed in Sections 7 and 8.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Methods and material for containment and cleaning up



Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Cleaning up Use personal protective equipment. Dam up. Cover liquid spill with sand, earth or other Non combustible absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Wear personal protective equipment.

Wash thoroughly after handling. Use this material with adequate ventilation. The product is not explosive.

Conditions for safe storage, including any incompatibilities

If the 3V Lithium Manganese Dioxide Button Cell is subject to storage for such a long term as more than 3 months, it is recommended to recharge the 3V Lithium Manganese Dioxide Button Cell periodically. 3 months: -10°C~+40°C, 45 to 85%RH

And recommended at 0°C~+35°C for long period storage.

Do not storage 3V Lithium Manganese Dioxide Button Cell haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by other metal objects.

Keep out of reach of children.

Do not expose 3V Lithium Manganese Dioxide Button Cell to heat or fire. Avoid storage in direct sunlight. Do not store together with oxidizing and acidic materials.

Keep ignition sources away- Do not smoke.

Store in cool, dry and well-ventilated place.

Incompatible Products None known.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control parameters

None

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962(11th Cir., 1992).

Appropriate engineering controls

Engineering Measures Showers

Evewash stations

Ventilation systems

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Ensure adequate ventilation.

Individual protection measures, such as personal protective equipment

Eye/Face Protection:



Body protection:



Protective work clothing.

Skin protection:



Material of gloves:

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material:

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

Respiratory Protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

	Form: button	
Physical	Color: silver	
State	Odour: Odourless	
	Odor Threshold: No information av	vailable
Change in co	ondition:	
pH, with ind	lication of the concentration	Not determined.
Melting poir	nt/freezing point	Not determined.
Initial boiling point and Boiling range:		Not determined.
Flash Point		Not determined.
Evaporation rate		Not determined.
Flammability (solid, gas)		Not determined.
Upper/lower flammability or explosive limits		Not determined.
Vapor Pressure:		Not determined.
Vapor Density:		Not determined.
relative density:		Not determined.
Solubility in Water:		Not determined.
Solubility in other solvents		Not determined.
n-octanol/water partition coefficient		Not determined.



Auto-ignition temperature	Product is not self-igniting.
Decomposition temperature	Not determined.
Odout threshold	Not determined.
Evaporation rate	Not determined.
Viscosity	Not determined.
Other Information	:
Voltage	3.0V
Electric capacity	210mAh
Lithium content	0.063g

10. STABILITY AND REACTIVITY

<u>Reactivity</u>: Stable under recommended storage and handling conditions (see section 7, Handling and storage). <u>Chemical stability</u>: Stable under normal conditions of use, storage and transport.

Thermal decomposition/conditions to be avoided: No decomposition if used according to specifications.

Possibility of Hazardous Reactions: None under normal processing.

Hazardous Polymerization: Hazardous polymerization does not occur.

Conditions to avoid: Strong heating, fire, Incompatible materials.

Incompatible materials: Strong oxidizing agents. Strong acids.Base metals.

Hazardous Decomposition Products: Carbon oxides, Other irritating and toxic gases.

11. TOXICOLOGICAL INFORMATION

Acute toxiciy: No data available.

LD/LC50 values relevant for classification:

Not available.

Skin corrosion/irritation: No irritant effect.

Serious eye damage/irritation: Cause serious eye irritation.

Respiratory or skin sensitization: No sensitizing effects known.

Specific target organ system toxicity: No information available.

CMR effects(carcinogenity, mutagenicity and toxicity for reproduction): No information available.

12. Ecological Information

Toxicity:

Acquatic toxicity:

No further relevant information available.

Persistence and degradability: No further relevant information available.

Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available.



Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable. **Other adverse effects:** No information available.

13. DISPOSAL CONSIDERATIONS

[•] Waste treatment methods

Recommendation: Must not be disposed together with household garbage.

Do not allow product to reach sewage system

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.

14. TRANSPORT INFORMATION

Land transport

ADR/RID class: Not regulated. UN-Number: UN3090 or UN3091.

Maritime transport

IMDG Class: Class 9. UN Number: UN3090 or UN3091. Marine pollutant: No <u>Air transport</u>

ICAO/IATA Class: Class 9

UN/ID Number: UN3090 or UN3091

Environmental hazards: Not applicable.

Special precautions for user: Not applicable.

Transport/Additional information: Not restricted goods according to the above specifications.

The 3V Lithium Manganese Dioxide Button Cell had been tested according to the requirements of the UN manual of tests and Criteria, Part III, subsection 38.3;

The lithium ion batteries according to Section II of PACKING INSTRUCTION 968, or Section II of PACKING INSTRUCTION $969 \sim 970$ of the Dangerous Goods regulations 59^{th} Edition may be transported. The packaging shall be adequate to avoid mechanical damage during transport, handling and stacking. The materials and pack design shall be chosen so as to prevent the development of unintentional electrical conduction, corrosion of the terminals and ingress of moisture.

Meets requirements of Special Provision 188 of IMDG(38-16) to be transported as non-dangerous goods Meets the requirements of 49CFR173.185 to be transported as non-dangerous goods for road, rail, air, and vessel (Effective August 6, 2014 per HM224F)

The package must be handled with care and that a flammability hazard exists if the package is damaged;

15. REGULATORY INFORMATION



Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation:

Authorisations: No information available.

Restrictions on use: No information available.

Regulatory information

CAS No.	EU	US	Japan	Canada	Austrlia	Korea	China
	(EINECS)	(TSCA)	(ENCS)	(DSL/	(AICS)	(ECL)	(IECSC)
				NDSL)			
7439-93-2	Listed	Listed	Listed	DSL	Listed	Listed	Listed
108-32-7	Listed	Listed	Listed	DSL	Listed	Listed	Listed
1313-13-9	Listed	Listed	Listed	DSL	Listed	Listed	Listed
12597-68-1	Listed	Listed	Listed	DSL	Listed	Listed	Listed
7791-03-9	Listed	Listed	Listed	DSL	Listed	Listed	Listed
7782-42-5	Listed	Listed	Listed	DSL	Listed	Listed	Listed

Chemical safety assessment A Chemical Safety Assessment has not been carried out.

16. OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases:

R20/22: Harmful by inhalation and if swallowed.

R36: Irritating to eyes.

H302: Harmful if swallowed.

H332: Harmful if inhaled.



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SECTION 1. IDENTIFICATION		
Product name	: PURELL® Healthcare Advanced Hand Sanitizer ULTRA NOURISHING™ Foam	
Manufacturer or supplier's	details	
Company name of supplier	: GOJO Industries, Inc.	
Address	: One GOJO Plaza, Suite 500 Akron, Ohio 44311	
Telephone	: 1 (330) 255-6000	
Emergency telephone number	: 1-800-424-9300 CHEMTREC	
Recommended use of the c	hemical and restrictions on use	
Recommended use	: Hand Sanitizer	
Restrictions on use	: This is a personal care or cosmetic product that is safe for consumers and other users under normal and reasonably foreseeable use. Cosmetics and consumer products, specifically defined by regulations around the world, are exempt from the requirement of an SDS for the consumer. While this material is not considered hazardous, this SDS contains valuable information critical to the safe handling an proper use of the product for industrial 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 3
Eye irritation	: Category 2A
GHS label elements Hazard pictograms	
Signal word	: Warning



 Hazard statements H226 Flammable liquid and vapour. H319 Causes serious eye irritation. 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 wate for several minutes. Remove contact lenses, if present and et 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 	Version 1.0	SDS Number: 400000005381	Revision Date: 05/02/2017
 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 wate for several minutes. Remove contact lenses, if present and et 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 	Hazard statements	•	•
Storage: P403 + P235 Store in a well-ventilated place. Keep cool. Disposal: P501 Dispose of contents/ container to an approved waste disposal plant.	Precautionary statements	 P210 Keep away from heat/sp No smoking. P233 Keep container tightly cle P240 Ground/bond container a P241 Use explosion-proof elec equipment. P242 Use only non-sparking to P243 Take precautionary mea P280 Wear eye protection/ fac Response: P305 + P351 + P338 IF IN EY for several minutes. Remove of to do. Continue rinsing. P337 + P313 If eye irritation pe attention. P370 + P378 In case of fire: U alcohol-resistant foam to extine Storage: P403 + P235 Store in a well-ve Disposal: P501 Dispose of contents/ cor 	osed. and receiving equipment. ctrical/ ventilating/ lighting/ ools. asures against static discharge. ce protection. YES: Rinse cautiously with water contact lenses, if present and eas ersists: Get medical advice/ lse dry sand, dry chemical or guish. entilated place. Keep cool.

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Chemical name	CAS-No.	Concentration (%)
Ethyl Alcohol	64-17-5	>= 50 - < 70
Isopropyl Alcohol	67-63-0	>= 1 - < 5

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 with water and soap as a precaution. Get medical attention if irritation develops and persists.
In case of eye contact	: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.



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	If easy to do, remove contact ler Seek medical advice.	ns, if worn.
If swallowed	: Do NOT induce vomiting. Rinse mouth with water. Obtain medical attention.	
Most important symptoms and effects, both acute and delayed	: Causes serious eye irritation.	
Protection of first-aiders	: First Aid responders should pay and use the recommended prote	

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 Silicon oxides
Hazardous combustion products	:	Carbon oxides Silicon 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,	: Use personal protective equipment.
protective equipment and	Ensure adequate ventilation.
emergency procedures	Remove all sources of ignition.
	Evacuate personnel to safe areas.



PURELL® Healthcare Advanced Hand Sanitizer ULTRA NOURISHING[™] Foam

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	Keep people away from and up Material can create slippery co	•
Environmental precautions	: Discharge into the environment Prevent further leakage or spills Retain and dispose of contamin Local authorities should be adv cannot be contained.	age if safe to do so. nated wash water.
Methods and materials for containment and cleaning up	: Non-sparking tools should be used.	

Advice on safe handling	 For personal protection see section 8. Keep away from heat. Use with local exhaust ventilation. Avoid contact with eyes.
Conditions for safe storage	 Take measures to prevent the build up of electrostatic charge. Keep in properly labelled containers. Keep container tightly closed in a dry and well-ventilated place. Store in accordance with the particular national regulations.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Ethyl Alcohol	64-17-5	TWA	1,000 ppm 1,900 mg/m3	NIOSH REL
		TWA	1,000 ppm 1,900 mg/m3	OSHA Z-1
		STEL	1,000 ppm	ACGIH
Isopropyl Alcohol	67-63-0	TWA	200 ppm	ACGIH
		STEL	400 ppm	ACGIH
		TWA	400 ppm 980 mg/m3	NIOSH REL
		ST	500 ppm 1,225 mg/m3	NIOSH REL
		TWA	400 ppm 980 mg/m3	OSHA Z-1



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Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Samplin g time	Permissible concentratio n	Basis
Isopropyl Alcohol	67-63-0	Acetone	Urine	End of shift at end of workwee k	40 mg/l	ACGIH BEI
Personal protective equ	ipment					
Respiratory protection		personal resp quired.	iratory prote	ctive equipr	nent normally	
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 measures necessary provided product is used correctly.					
Protective measures	co the En	oose body pro ncentration and specific work- sure that eye f ated close to t	d amount of -place. lushing syste	dangerous ems and sa	substances, a	
Hygiene measures	pra	ndle in accord actice. oid contact wit	_	od industria	al hygiene and	safety

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: liquid
Colour	: clear, colourless, yellow
Odour	: like fruit
Odour Threshold	: No data available
рН	: 6.5 - 8.5, (20 °C)
Melting point/freezing point	: No data available
Initial boiling point and boiling range	: 75 °C
Flash point	: 23 °C
Evaporation rate	: No data available



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Flammability (solid, gas)	: Not applicable	
Upper explosion limit	: No data available	
Lower explosion limit	: No data available	
Vapour pressure	: No data available	
Relative vapour density	: No data available	
Density	: 0.875 g/cm3	
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 no	t classified self-reactive.
Viscosity Viscosity, kinematic	: 10 - 20 mm2/s (20 °C)	
Explosive properties	: Not explosive	
Oxidizing properties	: The substance or mixture is no	t classified as oxidizing.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Not classified as a reactivity hazard.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Vapours may form explosive mixture with air.
Conditions to avoid	: Heat, flames and sparks.
Incompatible materials	: Oxidizing agents
Hazardous decomposition products	: No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure Inhalation Eye contact Skin contact



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Acute toxicity		
Not classified based on ava	ailable 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	
Skin corrosion/irritation		
Not classified based on ava	ailable information.	
Components:		
Ethyl Alcohol:		
Species: Rabbit		
Method: OECD Test Guide	line 404	

Result: No skin irritation

Isopropyl Alcohol:

Species: Rabbit Result: No skin irritation

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

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)



	Juin	
ersion 1.0	SDS Number: 40000000538	81 Revision Date: 05/02/2017
Exposure routes: Skin Species: Mouse Result: negative	contact	
Isopropyl Alcohol: Test Type: Buehler Te Exposure routes: Skin Species: Guinea pig Method: OECD Test C Result: negative	contact	
Germ cell mutagenic	itv	
-	n available information.	
Components:		
Ethyl Alcohol:		
Genotoxicity in vitro	: Test Type: In vitro mamr Result: negative	nalian cell gene mutation test
Genotoxicity in vivo	: Test Type: Rodent domin Test species: Mouse Application Route: Inges Result: negative	nant lethal test (germ cell) (in vivo) tion
Isopropyl Alcohol:		
Genotoxicity in vitro	: Test Type: Bacterial reve Result: negative	erse mutation assay (AMES)
Genotoxicity in vivo	: Test Type: Mammalian e cytogenetic assay) Test species: Mouse Application Route: Intrap Result: negative	erythrocyte micronucleus test (in vivo peritoneal injection
Caroinogoniaity		
Carcinogenicity	n available information.	
NUL CIASSILIEU DASEU O		

Components:

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.



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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.		
Reproductive toxicity Not classified based on a	available information.			
Components:				
Ethyl Alcohol: Effects on fertility	: Test Type: Two-generation rep Species: Mouse Application Route: Ingestion Method: OECD Test Guideline Result: negative			
Isopropyl Alcohol: Effects on fertility	: Test Type: Two-generation rep Species: Rat Application Route: Ingestion Result: negative	production toxicity study		
Effects on foetal development	: Test Type: Embryo-foetal deve Species: Rat Application Route: Ingestion Result: negative	elopment		

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.

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



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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		
Persistence and degradability			
<u>Components:</u> Ethyl Alcohol: Biodegradability	: Result: Readily biodegradable. Biodegradation: 84 % Exposure time: 20 d		
Isopropyl Alcohol: Biodegradability	: Result: rapidly degradable		
Bioaccumulative potential			
Components: Ethyl Alcohol: Partition coefficient: n- octanol/water	: log Pow: -0.35		



SDS Number: 40000005381	Revision Date: 05/02/2017
: log Pow: 0.05	
40 CFR Protection of Environm Stratospheric Ozone - CAA Sec	,
This product neither contains, n Class I or Class II ODS as defir Section 602 (40 CFR 82, Subpt	ned by the U.S. Clean Air Act
	 : log Pow: 0.05 40 CFR Protection of Environm Stratospheric Ozone - CAA Sec This product neither contains, r Class I or Class II ODS as defir

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	: Alcohols, n.o.s.				
	(Ethanol, Propan-2-ol)				
Class	: 3				
Packing group	: 111				
Packing instruction (cargo	: 366				
aircraft)					
Packing instruction	: 355				
(passenger aircraft)					
IMDG-Code					
UN number	: UN 1987				
Proper shipping name	: ALCOHOLS, N.O.S.				
	(Ethanol, Propan-2-ol)				
Class	: 3				
Packing group	: 111				
Labels	: 3				
EmS Code	: F-E, S-D				



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Marine pollutant National Regulations	: no	
49 CFR UN/ID/NA number Proper shipping name	: UN 1987 : Alcohols, n.o.s. (Ethanol, Propan-2-ol)	
Class	: 3	
Packing group ERG Code	: III : 127	
Marine pollutant	. 127 : no	

SECTION 15. REGULATORY INFORMATION

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

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

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:		ng levels
		Isopropyl Alcohol	67-63-0	3.4103 %

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 SOCMI Intermediate or Final VOC's (40 CFR 60.489):

Ethyl Alcohol	64-17-5	65.2821 %
Isopropyl Alcohol	67-63-0	3.4103 %

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

US State Regulations

Massachusetts Right To Know

		/
Ethyl Alcohol	64-17-5	50 - 70 %
Isopropyl Alcohol	67-63-0	1 - 5 %



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Pennsylvania Right To Know				
-	Ethyl Alcohol		64-17-5	50 - 70 %
	Water (Aqua)		7732-18-5	20 - 30 %
	Isopropyl Alcohol		67-63-0	1 - 5 %
New Jersey Rig	ght To Know			
	Ethyl Alcohol		64-17-5	50 - 70 %
	Water (Aqua)		7732-18-5	20 - 30 %
	Isopropyl Alcohol		67-63-0	1 - 5 %
	PEG-12 Dimethic	cone	68937-54-2	1 - 5 %
California Prop	,	This product does not conta of California to cause cance reproductive harm.		
The componen	nts of this produc	t are reported in the follow	ing inventories:	
TSCA	:	On the inventory, or in comp	pliance with the inve	ntory
AICS	:	On the inventory, or in comp	pliance with the inve	ntory
DSL	:	On the inventory, or in comp	pliance with the inve	ntory
ENCS	:	On the inventory, or in comp	pliance with the inve	ntory
ISHL	:	On the inventory, or in comp	pliance with the inve	ntory
KECI	:	On the inventory, or in comp	pliance with the inve	ntory
PICCS	:	On the inventory, or in comp	pliance with the inve	ntory
IECSC	:	On the inventory, or in comp	pliance with the inve	ntory
NZIoC	:	On the inventory, or in comp	pliance with the inve	ntory

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)



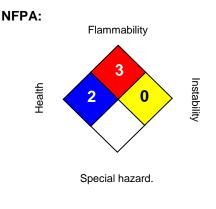
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SECTION 16. OTHER INFORMATION

Further information



HMIS III:



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

Revision Date

: 05/02/2017

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.