SAFETY DATA SHEET



Section 1. Identification Product identifier : Product code : Not available. Other means of identification :

Product type

: Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Identified uses

Wiping and cleaning various surfaces and components. For professional use only.



Section 1. Identification

:

:

Supplier's details

Emergency telephone			
number (with hours of			
operatio	ו)		

Section 2. Hazards identification		
Classification of the substance or mixture	: FLAMMABLE LIQUIDS - Category 2 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3	
GHS label elements, includi	ng precautionary statements	
Hazard pictograms		
Signal word	: Danger	
Hazard statements	: H225 - Highly flammable liquid and vapour. H319 - Causes serious eye irritation. H336 - May cause drowsiness or dizziness.	
Precautionary statements		

Herkshire

Section 2. Hazards identification

General	1	Not applicable.
Prevention	:	 P280 - Wear eye or face protection. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P241 - Use explosion-proof electrical, ventilating or lighting equipment. P242 - Use non-sparking tools. P243 - Take action to prevent static discharges. P261 - Avoid breathing vapour.
Response	:	P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell. 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 or attention.
Storage	:	P403 + P233 - Store in a well-ventilated place. Keep container tightly closed. P403 + P235 - Keep cool.
Disposal	:	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Other hazards which do not	:	None known.

result in classification

Section 3. Composition/information on ingredients

Substance/mixture

: Mixture

Ingredient name	%	CAS number
Isopropyl alcohol	70	67-63-0

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Chemical formula

: Not applicable.

Section 4. First aid measures

Description of necessary first aid measures Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention. Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Get medical attention. If necessary, call a poison centre or physician. **Skin contact** : Flush contaminated skin with plenty of water. Get medical attention if symptoms occur. : Wash out mouth with water. Remove victim to fresh air and keep at rest in a Ingestion position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison centre or physician. Never give anything by mouth to an unconscious

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Section 4. First aid measures

person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

Most important symptoms/effects, acute and delayed

wost important symptoms/e	necis,	acute and delayed
Potential acute health effe	ts	
Eye contact	: Ca	auses serious eye irritation.
Inhalation		an cause central nervous system (CNS) depression. May cause drowsiness or zziness.
Skin contact	: No	o known significant effects or critical hazards.
Ingestion	: Ca	an cause central nervous system (CNS) depression.
Over-exposure signs/symp	<u>toms</u>	
Eye contact	pa wa	dverse symptoms may include the following: ain or irritation atering dness
Inhalation	na he dr diz	dverse symptoms may include the following: ausea or vomiting eadache owsiness/fatigue zziness/vertigo nconsciousness
Skin contact	: No	o known significant effects or critical hazards.
Ingestion	: No	o known significant effects or critical hazards.
Indication of immediate me	ical at	tention and special treatment needed, if necessary
Notes to physician		eat symptomatically. Contact poison treatment specialist immediately if large antities have been ingested or inhaled.
Specific treatments	: No	o specific treatment.
Protection of first-aiders	is	o action shall be taken involving any personal risk or without suitable training. If it suspected that fumes are still present, the rescuer should wear an appropriate ask or self-contained breathing apparatus.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media	
Suitable extinguishing media	: Use dry chemical, CO ₂ , water spray (fog) or foam.
Unsuitable extinguishing media	: Do not use water jet.
Specific hazards arising from the chemical	: Highly flammable liquid and vapour. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion.
Hazardous thermal decomposition products	: Decomposition products may include the following materials: carbon dioxide carbon monoxide

Section 5. Firefighting measures

Special protective actions for fire-fighters	:	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
Special protective equipment for fire-fighters	:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protect	tiv	e equipment and emergency procedures
For non-emergency personnel	:	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Shut off all ignition sources. No flares, smoking or flames in hazard area. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	:	If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Environmental precautions	:	Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Methods and material for con	Itai	inment and cleaning up
Small spill	;	Vacuum or sweep up material and place in a designated, labelled waste container. Dispose of via a licensed waste disposal contractor.
Large spill	:	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spill product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures	Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not reuse container.
Advice on general occupational hygiene	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.

Section 7. Handling and storage

Conditions for safe storage,	
including any	area. Store in original container protected from direct sunlight in a dry, cool and well-
incompatibilities	ventilated area, away from incompatible materials (see Section 10) and food and
	drink. Store locked up. Eliminate all ignition sources. Separate from oxidising
	materials. Keep container tightly closed and sealed until ready for use. Do not store
	in unlabelled containers. Use appropriate containment to avoid environmental
	contamination.

Section 8. Exposure controls/personal protection

Control parameters

Ingredient name			Exposure limits
Isopropyl alcohol			Workplace Safety and Health Act (Singapore, 2/2006). PEL (long term): 400 ppm 8 hours. PEL (long term): 983 mg/m ³ 8 hours. PEL (short term): 1230 mg/m ³ 15 minutes. PEL (short term): 500 ppm 15 minutes.
Appropriate engineering controls		ventilation or other engineering cont contaminants below any recommen	Use process enclosures, local exhaust rols to keep worker exposure to airborne ded or statutory limits. The engineering controls ist concentrations below any lower explosive on equipment.
Environmental exposure controls			process equipment should be checked to ensure of environmental protection legislation.
Individual protection meas	<u>ures</u>		
Hygiene measures		eating, smoking and using the lavate Appropriate techniques should be us	roughly after handling chemical products, before ory and at the end of the working period. sed to remove potentially contaminated clothing. reusing. Ensure that eyewash stations and station location.
Eye/face protection	:	Recommended: Safety glasses.	
Skin protection			
Hand protection		be worn at all times when handling of this is necessary. Considering the p check during use that the gloves are	es complying with an approved standard should chemical products if a risk assessment indicates parameters specified by the glove manufacturer, e still retaining their protective properties. It akthrough for any glove material may be turers.
Body protection		being performed and the risks involved before handling this product. When wear anti-static protective clothing.	ne body should be selected based on the task ved and should be approved by a specialist there is a risk of ignition from static electricity, For the greatest protection from static anti-static overalls, boots and gloves.
Other skin protection			onal skin protection measures should be rformed and the risks involved and should be dling this product.
Respiratory protection		Recommended: Vapour respirator.	

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance	
Physical state	: Liquid. [Solid containing liquid (prewetted wiper)]
Colour	: White substrate with colourless liquid.
Odour	: Rubbing alcohol.
Odour threshold	: Not available.
рН	: 7
Melting point/freezing point	: Not available.
Boiling point, initial boiling point, and boiling range	: Not available.
Flash point	: Closed cup: 18°C (64.4°F)
Evaporation rate	: Not available.
Flammability	: Highly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and shocks and mechanical impacts.
Lower and upper explosion limit/flammability limit	: Lower: 2% Upper: 12.7%
Vapour pressure	: Not available.
Relative vapour density	: Not available.
Relative density	: Not available.
Solubility	: Insoluble in the following materials: cold water and hot water.
Partition coefficient: n- octanol/water	: Not applicable.
Auto-ignition temperature	: 399°C (750.2°F)
Decomposition temperature	: Not available.
Viscosity	: Not available.
Flow time (ISO 2431)	: Not available.
Particle characteristics	
Median particle size	: Not applicable.

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurise, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition.
Incompatible materials	: Highly reactive or incompatible with the following materials: oxidising materials.

Berkshire

Section 10. Stability and reactivity

Hazardous decomposition products

: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Isopropyl alcohol	LD50 Dermal LD50 Oral	Rabbit Rat	12800 mg/kg 5000 mg/kg	-
		T tat	eeee mg/kg	

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Isopropyl alcohol	Eyes - Moderate irritant	Rabbit	-	24 hours 100	-
	Eyes - Moderate irritant Eyes - Severe irritant Skin - Mild irritant	Rabbit Rabbit Rabbit	- - -	mg 10 mg 100 mg 500 mg	- -

Sensitisation

There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

There is no data available.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

Name		Route of exposure	Target organs
Isopropyl alcohol	Category 3	-	Narcotic effects

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

There is no data available.

Information on likely routes : Routes of entry anticipated: Oral, Dermal, Inhalation.

of exposure

 Potential acute health effects

 Eye contact
 : Causes serious eye irritation.

 Inhalation
 : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Berkshire

Section 11. Toxicological information

Skin contact

- : No known significant effects or critical hazards.
- Ingestion : Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact	: Adverse symptoms may include the following: pain or irritation watering redness
Inhalation	: Adverse symptoms may include the following: nausea or vomiting headache drowsiness/fatigue dizziness/vertigo unconsciousness
Skin contact	: No known significant effects or critical hazards.
Ingestion	: No known significant effects or critical hazards.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

<u>Short term exposure</u>	
Potential immediate effects	: No known significant effects or critical hazards.
Potential delayed effects	: No known significant effects or critical hazards.
<u>Long term exposure</u>	
Potential immediate effects	: No known significant effects or critical hazards.
Potential delayed effects	: No known significant effects or critical hazards.
Potential chronic health effe	ects
General	: No known significant effects or critical hazards.
Carcinogenicity	: No known significant effects or critical hazards.
Mutagenicity	: No known significant effects or critical hazards.
Reproductive toxicity	: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name				(vapours)	Inhalation (dusts and mists) (mg/l)
Isopropyl alcohol	5000	12800	N/A	N/A	N/A

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Isopropyl alcohol	Acute EC50 7550 mg/L Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 1400000 µg/L Marine water Acute LC50 4200 mg/L Fresh water	Crustaceans - Crangon crangon Fish - Rasbora heteromorpha	48 hours 96 hours

Persistence/degradability

There is no data available.

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Isopropyl alcohol	0.05	-	low

Mobility in soil	
Soil/water partition coefficient (K _{oc})	: No data available.

Other adverse effects

: No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimised wherever possible. Disposal of this product should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues.

Section 14. Transport information

	UN	IMDG	ΙΑΤΑ	ADR/RID	ADN
UN number	UN3175	UN3175	UN3175	UN3175	UN3175
UN proper shipping name	SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S. (Isopropyl alcohol)				
Transport hazard class (es)	4.1	4.1	4.1	4.1	4.1
Packing group	11	11	11	11	11

 Environmental hazards
 No.
 No.
 No.

Special precautions for user : Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident.

Transport in bulk according : Not available. to IMO instruments

Section 15. Regulatory information

Singapore - hazardous chemicals under government control

None.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Section 16. Other information

<u>History</u>	
Date of issue/Date of revision	: 2021/08/15
Date of previous issue	: 2019/03/15
Version	: 5
Internal code	: 120-001
Prepared by	: KMK Regulatory Services Inc.
Key to abbreviations	: ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = International Air Transport Association IBC = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) N/A = Not available SGG = Segregation Group UN = United Nations

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
FLAMMABLE LIQUIDS - Category 2 SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE (Narcotic effects) - Category 3	On basis of test data Calculation method Calculation method

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the abovenamed supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. 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.

