SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Issuing Date 29-Dec-2022 **Revision date** 14-Dec-2022 **Revision Number** 3

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Code(s) A661-4

Product Name A661-4

Unique Formula Identifier (UFI) JK1M-GCEH-F10H-3TKK

Pure substance/mixture Mixture

Contains Isopropyl acetate, Isopropyl alcohol

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

Recommended use Additive

Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Company
Markem-Imaje Industries
9, rue Gaspard Monge
26500 Bourg-lès-Valence
France
http://www.markem-imaje.com
E-mail: sds@markem-imaje.com

MARKEM-IMAJE SINGAPORE PTE LTD
9 Toh Guan Road East
#04-01 Alliance Building
SINGAPORE 608604
65 6760 5388

1.4. Emergency telephone number

Emergency Telephone Chemtrec: International 1-800-424-9300 / Local +44-2038850382

National Emergency Service /
Poison Control Center NHS Direct (UK): 111

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Serious eye damage/eye irritation	Category 2 - (H319)
Specific target organ toxicity (single exposure)	Category 3 - (H336)
Category 3 Narcotic effects	
Flammable liquids	Category 2 - (H225)

2.2. Label elements

Contains Isopropyl acetate, Isopropyl alcohol

Signal word
Danger

Hazard statements
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness
H225 - Highly flammable liquid and vapor
EUH066 - Repeated exposure may cause skin dryness or cracking

Precautionary statements
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P312 - Call a POISON CENTER or doctor if you feel unwell
P370 + P378 - In case of fire: Use dry chemical, CO2, water spray or alcohol-resistant foam to extinguish
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
P501 - Dispose of contents and container to an approved waste disposal plant
P261 - Avoid breathing vapors

Additional information
This product requires tactile warnings if supplied to the general public.

2.3. Other hazards

Toxic to aquatic life.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	EC No (EU Index No)	CAS No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Isopropyl acetate	203-561-1	108-21-4	60 - 70	Eye Irrit. 2 (H319) STOT SE 3 (H336) Flam. Liq. 2 (H225) (EUH066)	01-2119537214-46	-	-	-
Ethyl alcohol	(603-002-00-5) 200-578-6	64-17-5	30 - 40	Flam. Liq. 2 (H225) Eye Irrit. 2 (H319)	01-2119457610-43	-	-	-
Isopropyl alcohol	200-661-7	67-63-0	1 - 5	Eye Irrit. 2 (H319)	01-2119457558-25	-	-	-

				STOT SE 3 (H336) Flam. Liq. 2 (H225)				

Full text of H- and EUH-phrases: see section 16

Acute Toxicity Estimate
If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATEmix) for classifying a mixture based on its components

Chemical name	Oral LD50 mg/kg	Dermal LD50 mg/kg	Inhalation LC50 - 4 hour - dust/mist - mg/L	Inhalation LC50 - 4 hour - vapor - mg/L	Inhalation LC50 - 4 hour - gas - ppm
Isopropyl acetate 108-21-4	3000	17436	Inhalation LC50 Rat 50600 mg/m³ 8 h (vapor, Source: ECHA_API)	50600	Inhalation LC50 Rat 50600 mg/m³ 8 h (vapor, Source: ECHA_API)
Ethyl alcohol 64-17-5	7060	No data available	Inhalation LC50 Rat 116.9 mg/L 4 h (males, vapor, Source: ECHA_API); Inhalation LC50 Rat 133.8 mg/L 4 h (females, vapor, Source: ECHA_API)	116.9 133.8	Inhalation LC50 Rat 116.9 mg/L 4 h (males, vapor, Source: ECHA_API); Inhalation LC50 Rat 133.8 mg/L 4 h (females, vapor, Source: ECHA_API)
Isopropyl alcohol 67-63-0	1870	4059	Inhalation LC50 Rat >10000 ppm 6 h (no deaths occurred, vapor, Source: ECHA_API)	>10000	Inhalation LC50 Rat >10000 ppm 6 h (no deaths occurred, vapor, Source: ECHA_API)

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance.

Inhalation Remove to fresh air. IF exposed or concerned: Get medical advice/attention.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Ingestion Clean mouth with water and afterwards drink plenty of water. Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician.

Self-protection of the first aider Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms May cause redness and tearing of the eyes. Burning sensation. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Dry chemical. Carbon dioxide (CO2). Water spray. Alcohol resistant foam.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material.

Other information Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

6.3. Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Methods for cleaning up Take precautionary measures against static discharges. Dam up. Soak up with inert

absorbent material. Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Use personal protection equipment. Avoid breathing vapors or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. In case of insufficient ventilation, wear suitable respiratory equipment.

General hygiene considerations Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labeled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
Isopropyl acetate 108-21-4	-	TWA: 100 ppm TWA: 420 mg/m³ STEL 100 ppm STEL 420 mg/m³ Ceiling: 100 ppm Ceiling: 420 mg/m³	TWA: 100 ppm TWA: 424 mg/m³ STEL: 200 ppm STEL: 849 mg/m³	-	STEL: 200 ppm STEL: 849 mg/m³
Ethyl alcohol 64-17-5	-	TWA: 1000 ppm TWA: 1900 mg/m³ STEL 2000 ppm STEL 3800 mg/m³	TWA: 1000 ppm TWA: 1907 mg/m³	TWA: 1000 mg/m³	TWA: 1000 ppm TWA: 1900 mg/m³
Isopropyl alcohol 67-63-0	-	TWA: 200 ppm TWA: 500 mg/m³	TWA: 200 ppm TWA: 500 mg/m³	STEL: 1225.0 mg/m³ TWA: 980.0 mg/m³	TWA: 400 ppm TWA: 999 mg/m³

		STEL 800 ppm STEL 2000 mg/m³	STEL: 400 ppm STEL: 1000 mg/m³		STEL: 500 ppm STEL: 1250 mg/m³
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
Isopropyl acetate 108-21-4	-	TWA: 800 mg/m³ Ceiling: 1000 mg/m³	TWA: 150 ppm TWA: 625 mg/m³	-	TWA: 100 ppm TWA: 420 mg/m³ STEL: 200 ppm STEL: 850 mg/m³
Ethyl alcohol 64-17-5	-	TWA: 1000 mg/m³ Ceiling: 3000 mg/m³	TWA: 1000 ppm TWA: 1900 mg/m³	TWA: 500 ppm TWA: 1000 mg/m³ STEL: 1000 ppm STEL: 1900 mg/m³	TWA: 1000 ppm TWA: 1900 mg/m³ STEL: 1300 ppm STEL: 2500 mg/m³
Isopropyl alcohol 67-63-0	-	TWA: 500 mg/m³ Ceiling: 1000 mg/m³ D*	TWA: 200 ppm TWA: 490 mg/m³	TWA: 150 ppm TWA: 350 mg/m³ STEL: 250 ppm STEL: 600 mg/m³	TWA: 200 ppm TWA: 500 mg/m³ STEL: 250 ppm STEL: 620 mg/m³
Chemical name	France	Germany TRGS	Germany DFG	Greece	Hungary
Isopropyl acetate 108-21-4	TWA: 250 ppm TWA: 950 mg/m³ STEL: 300 ppm STEL: 1140 mg/m³	-	TWA: 100 ppm TWA: 420 mg/m³ Peak: 200 ppm Peak: 840 mg/m³	TWA: 250 ppm TWA: 950 mg/m³ STEL: 275 ppm STEL: 1140 mg/m³	TWA: 420 mg/m³
Ethyl alcohol 64-17-5	TWA: 1000 ppm TWA: 1900 mg/m³ STEL: 5000 ppm STEL: 9500 mg/m³	TWA: 200 ppm TWA: 380 mg/m³	TWA: 200 ppm TWA: 380 mg/m³ Peak: 800 ppm Peak: 1520 mg/m³	TWA: 1000 ppm TWA: 1900 mg/m³	TWA: 1900 mg/m³ STEL: 3800 mg/m³
Isopropyl alcohol 67-63-0	STEL: 400 ppm STEL: 980 mg/m³	TWA: 200 ppm TWA: 500 mg/m³	TWA: 200 ppm TWA: 500 mg/m³ Peak: 400 ppm Peak: 1000 mg/m³	TWA: 400 ppm TWA: 980 mg/m³ STEL: 500 ppm STEL: 1225 mg/m³	TWA: 500 mg/m³ STEL: 1000 mg/m³ b*
Chemical name	Ireland	Italy MDLPS	Italy AIDII	Latvia	Lithuania
Isopropyl acetate 108-21-4	TWA: 100 ppm STEL: 150 ppm	-	TWA: 100 ppm TWA: 418 mg/m³ STEL: 200 ppm STEL: 836 mg/m³	-	-
Ethyl alcohol 64-17-5	STEL: 1000 ppm	-	STEL: 1000 ppm STEL: 1884 mg/m³	TWA: 1000 mg/m³	TWA: 500 ppm TWA: 1000 mg/m³ STEL: 1000 ppm STEL: 1900 mg/m³
Isopropyl alcohol 67-63-0	TWA: 200 ppm STEL: 400 ppm Sk*	-	TWA: 200 ppm TWA: 492 mg/m³ STEL: 400 ppm STEL: 983 mg/m³	TWA: 350 mg/m³ STEL: 600 mg/m³	TWA: 150 ppm TWA: 350 mg/m³ STEL: 250 ppm STEL: 600 mg/m³
Chemical name	Luxembourg	Malta	Netherlands	Norway	Poland
Isopropyl acetate 108-21-4	-	-	-	TWA: 100 ppm TWA: 420 mg/m³ STEL: 150 ppm STEL: 525 mg/m³	STEL: 1000 mg/m³ TWA: 600 mg/m³
Ethyl alcohol 64-17-5	-	-	TWA: 260 mg/m³ STEL: 1900 mg/m³ H*	TWA: 500 ppm TWA: 950 mg/m³ STEL: 625 ppm STEL: 1187.5 mg/m³	TWA: 1900 mg/m³
Isopropyl alcohol 67-63-0	-	-	-	TWA: 100 ppm TWA: 245 mg/m³ STEL: 150 ppm STEL: 306.25 mg/m³	STEL: 1200 mg/m³ TWA: 900 mg/m³ skóra*
Chemical name	Portugal	Romania	Slovakia	Slovenia	Spain
Isopropyl acetate 108-21-4	TWA: 100 ppm STEL: 200 ppm	TWA: 96 ppm TWA: 400 mg/m³ STEL: 144 ppm STEL: 600 mg/m³	-	-	TWA: 100 ppm TWA: 425 mg/m³ STEL: 200 ppm STEL: 850 mg/m³
Ethyl alcohol 64-17-5	TWA: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m³	TWA: 500 ppm TWA: 960 mg/m³	TWA: 960 mg/m³ TWA: 500 ppm	STEL: 1000 ppm STEL: 1910 mg/m³

		STEL: 5000 ppm STEL: 9500 mg/m³	Ceiling: 1920 mg/m³	STEL: 1000 ppm STEL: 1920 mg/m³	
Isopropyl alcohol 67-63-0	TWA: 200 ppm STEL: 400 ppm	TWA: 81 ppm TWA: 200 mg/m³ STEL: 203 ppm STEL: 500 mg/m³	TWA: 200 ppm TWA: 500 mg/m³ Ceiling: 1000 mg/m³	TWA: 200 ppm TWA: 500 mg/m³ STEL: 400 ppm STEL: 1000 mg/m³	TWA: 200 ppm TWA: 500 mg/m³ STEL: 400 ppm STEL: 1000 mg/m³

Chemical name	Sweden	Switzerland	United Kingdom
Isopropyl acetate 108-21-4	-	TWA: 100 ppm TWA: 420 mg/m³ STEL: 200 ppm STEL: 840 mg/m³	STEL: 200 ppm STEL: 849 mg/m³
Ethyl alcohol 64-17-5	NGV: 500 ppm NGV: 1000 mg/m³ Vägledande KGV: 1000 ppm Vägledande KGV: 1900 mg/m³	TWA: 500 ppm TWA: 960 mg/m³ STEL: 1000 ppm STEL: 1920 mg/m³	TWA: 1000 ppm TWA: 1920 mg/m³ STEL: 3000 ppm STEL: 5760 mg/m³
Isopropyl alcohol 67-63-0	NGV: 150 ppm NGV: 350 mg/m³ Vägledande KGV: 250 ppm Vägledande KGV: 600 mg/m³	TWA: 200 ppm TWA: 500 mg/m³ STEL: 400 ppm STEL: 1000 mg/m³	TWA: 400 ppm TWA: 999 mg/m³ STEL: 500 ppm STEL: 1250 mg/m³

Biological occupational exposure limits

Chemical name	European Union	Austria	Bulgaria	Croatia	Czech Republic
Isopropyl alcohol 67-63-0	-	-	-	50 mg/L - blood (Acetone) - at the end of the work shift 50 mg/L - urine (Acetone) - at the end of the work shift	-

Chemical name	Denmark	Finland	France	Germany DFG	Germany TRGS
Isopropyl alcohol 67-63-0	-	-	-	25 mg/L (whole blood - Acetone end of shift) 25 mg/L (urine - Acetone end of shift) 25 mg/L - BAT (end of exposure or end of shift) urine 25 mg/L - BAT (end of exposure or end of shift) blood	25 mg/L (whole blood - Acetone end of shift) 25 mg/L (urine - Acetone end of shift)

Chemical name	Hungary	Ireland	Italy MDLPS	Italy AIDII
Isopropyl alcohol 67-63-0	-	40 mg/L (urine - Acetone end of shift at end of workweek)	-	40 mg/L - urine (Acetone) - end of shift at end of workweek

Chemical name	Latvia	Luxembourg	Romania	Slovakia
Isopropyl alcohol 67-63-0	-	-	50 mg/L - urine (Acetone) - end of shift	-

Chemical name	Slovenia	Spain	Switzerland	United Kingdom
Isopropyl alcohol 67-63-0	25 mg/L - blood (Acetone) - at the end of the work shift 25 mg/L - urine (Acetone) - at the end of the work shift	40 mg/L (urine - Acetone end of workweek)	25 mg/L (urine - Acetone end of shift) 0.4 mmol/L (urine - Acetone end of shift) 25 mg/L (whole blood - Acetone end of shift) 0.4 mmol/L (whole blood - Acetone end of shift)	-

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration

(PNEC)

Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
Isopropyl acetate 108-21-4	-	27 mg/kg bw/day [4] [6]	275 mg/m³ [4] [6] 558 mg/m³ [4] [7] 227 mg/m³ [5] [6]
Ethyl alcohol 64-17-5	-	343 mg/kg bw/day [4] [6]	950 mg/m³ [4] [6] 1900 mg/m³ [5] [7]
Isopropyl alcohol 67-63-0	-	888 mg/kg bw/day [4] [6]	500 mg/m³ [4] [6]

[4] Systemic health effects.
[5] Local health effects.
[6] Long term.
[7] Short term.

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
Isopropyl acetate 108-21-4	16 mg/kg bw/day [4] [6]	-	168 mg/m³ [4] [6] 335 mg/m³ [4] [7] 136 mg/m³ [5] [6]
Ethyl alcohol 64-17-5	87 mg/kg bw/day [4] [6]	-	114 mg/m³ [4] [6] 950 mg/m³ [5] [7]
Isopropyl alcohol 67-63-0	26 mg/kg bw/day [4] [6]	-	89 mg/m³ [4] [6]

[4] Systemic health effects.
[5] Local health effects.
[6] Long term.
[7] Short term.

Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
Isopropyl acetate 108-21-4	0.22 mg/L	1.1 mg/L	0.022 mg/L	-	-
Isopropyl alcohol 67-63-0	140.9 mg/L	140.9 mg/L	140.9 mg/L	-	-

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
Isopropyl acetate 108-21-4	1.25 mg/kg sediment dw	0.125 mg/kg sediment dw	190 mg/L	0.35 mg/kg soil dw	-
Isopropyl alcohol 67-63-0	552 mg/kg sediment dw	552 mg/kg sediment dw	2251 mg/L	28 mg/kg soil dw	160 mg/kg food

8.2. Exposure controls

Engineering controls No information available.

Personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Hand protection	Impervious gloves. Wear suitable gloves. Wear chemically resistant gloves (tested to EN374) in combination with specific activity training.
Skin and body protection	If there is a risk of contact:. Protective shoes or boots. Wear suitable protective clothing.
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.
General hygiene considerations	Do not eat, drink or smoke when using this product. Contaminated work clothing must not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection.
Environmental exposure controls	No information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Color	light green
Odor	Solvent.
Odor threshold	No information available

Property	**Values**	**Remarks • Method**
Melting point / freezing point	-70 °C	
Initial boiling point and boiling range	75 °C	
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	19.0	
Lower flammability or explosive limits	1.8	
Flash point	> 2 °C	
Autoignition temperature	350 °C	
Decomposition temperature		None known
pH	No data available	
pH (as aqueous solution)	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Water solubility	No data available partly soluble	
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Vapor pressure	No data available	None known
Relative density	0.845	
Bulk density	No data available	
Liquid Density	No data available	
Relative vapor density	No data available	None known
Particle characteristics		
Particle Size	No information available	
Particle Size Distribution	No information available	

9.2. Other information

9.2.1. Information with regard to physical hazard classes
Not applicable

9.2.2. Other safety characteristics
No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data
Sensitivity to mechanical impact None.
Sensitivity to static discharge Yes.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

Hazardous polymerization no.

10.4. Conditions to avoid

Conditions to avoid Heat, flames and sparks.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products none.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract. May cause drowsiness or dizziness.

Eye contact Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.

Skin contact Specific test data for the substance or mixture is not available. May cause irritation. Prolonged contact may cause redness and irritation.

Ingestion Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms May cause redness and tearing of the eyes. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Acute toxicity

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	3,837.70 mg/kg
ATEmix (dermal)	17,761.10 mg/kg
ATEmix (inhalation-vapor)	48.60 mg/l

6E-06 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.
33.567796 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.
98.334526 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas).
96.567796 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor).
98.334526 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist).

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Isopropyl acetate	= 3000 mg/kg (Rat)	> 17436 mg/kg (Rabbit)	= 50600 mg/m³ (Rat) 8 h
Ethyl alcohol	= 7060 mg/kg (Rat)	-	= 116.9 mg/L (Rat) 4 h = 133.8 mg/L (Rat) 4 h
Isopropyl alcohol	= 5840 mg/kg (Rat)	= 4059 mg/kg (Rabbit)	> 10000 ppm (Rat) 6 h

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

Skin corrosion/irritation May cause skin irritation.

Serious eye damage/eye irritation Classification based on data available for ingredients. Causes serious eye irritation.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure May cause drowsiness or dizziness.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties No information available.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Toxic to aquatic life.

Unknown aquatic toxicity Contains 1E-05 % of components with unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Ethyl alcohol	-	LC50: 12.0 - 16.0mL/L (96h, Oncorhynchus mykiss) LC50: >100mg/L (96h, Pimephales promelas) LC50: 13400 - 15100mg/L (96h, Pimephales promelas)	-	LC50: 9268 - 14221mg/L (48h, Daphnia magna) EC50: =2mg/L (48h, Daphnia magna)
Isopropyl alcohol	>1000: 96 h Desmodesmus subspicatus mg/L EC50 >1000: 72 h Desmodesmus subspicatus mg/L EC50	LC50: =9640mg/L (96h, Pimephales promelas) LC50: =11130mg/L (96h, Pimephales promelas) LC50: >1400000µg/L (96h, Lepomis macrochirus)	-	EC50: =13299mg/L (48h, Daphnia magna)

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation

Component Information

Chemical name	Partition coefficient
Isopropyl acetate	1.03
Ethyl alcohol	-0.35
Isopropyl alcohol	0.05

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment No information available.

Chemical name	PBT and vPvB assessment
Isopropyl acetate	The substance is not PBT / vPvB
Ethyl alcohol	The substance is not PBT / vPvB PBT assessment does not apply
Isopropyl alcohol	The substance is not PBT / vPvB PBT assessment does not apply

12.6. Endocrine disrupting properties

Endocrine disrupting properties No information available.

12.7. Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation. Do not dispose of waste into sewer. Do not allow into any sewer on the ground, or into any body of water. This material and its container must be disposed of as hazardous waste.

Contaminated packaging Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers. Dispose of wastes in an approved waste disposal facility. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations.

Other information Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

IATA

14.1 UN number or ID number	UN1993
14.2 UN proper shipping name	Flammable liquid, n.o.s. (ethanol / isopropyl acetate mixture)
14.3 Transport hazard class(es)	3
14.4 Packing group	II
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None

IMDG

14.1 UN number or ID number	UN1993
14.2 UN proper shipping name	Flammable liquid, n.o.s. (ethanol / isopropyl acetate mixture)
14.3 Transport hazard class(es)	3
14.4 Packing group	II
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None
EmS-No	F-E, S-E
Maritime transport in bulk according to IMO instruments	No information available

ADR

14.1 UN number or ID number	UN1993
14.2 UN proper shipping name	Flammable liquid, n.o.s. (ethanol / isopropyl acetate mixture)
14.3 Transport hazard class(es)	3
14.4 Packing group	II
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	None
Classification code	F1

SECTION 15: Regulatory information

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

National regulations

France
Occupational Illnesses (R-463-3, France)

Chemical name	French RG number
Isopropyl acetate 108-21-4	RG 84
Ethyl alcohol 64-17-5	RG 84
Isopropyl alcohol 67-63-0	RG 84

Germany
Water hazard class (WGK) slightly hazardous to water (WGK 1)

Netherlands

Chemical name	Netherlands - List of Carcinogens	Netherlands - List of Mutagens	Netherlands - List of Reproductive Toxins
Ethyl alcohol	Present	-	Fertility Category 1A Development Category 1A Can be harmful via breastfeeding

European Union
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorizations and/or restrictions on use:
This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorization per REACH Annex XIV
Isopropyl acetate - 108-21-4	75.	-
Isopropyl alcohol - 67-63-0	75.	-

Persistent Organic Pollutants
Not applicable

Dangerous substance category per Seveso Directive (2012/18/EU)
P5a - FLAMMABLE LIQUIDS
P5b - FLAMMABLE LIQUIDS
P5c - FLAMMABLE LIQUIDS

Ozone-depleting substances (ODS) regulation (EC) 1005/2009
Not applicable

Biocidal Products Regulation (EU) No 528/2012 (BPR)

Chemical name	Biocidal Products Regulation (EU) No 528/2012 (BPR)
Ethyl alcohol - 64-17-5	Product-type 1: Human hygiene Product-type 2: Disinfectants and algaecides not intended for direct application to humans or animals Product-type 4: Food and feed area
Isopropyl alcohol - 67-63-0	Product-type 2: Disinfectants and algaecides not intended for direct application to humans or animals Product-type 4:

	Food and feed area Product-type 1: Human hygiene

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDSL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECL	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status
NZIoC	Contact supplier for inventory compliance status

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals

15.2. Chemical safety assessment

Chemical Safety Report No information available

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3
EUH066 - Repeated exposure may cause skin dryness or cracking
H225 - Highly flammable liquid and vapor
H319 - Causes serious eye irritation
H336 - May cause drowsiness or dizziness

Legend
SVHC: Substances of Very High Concern for Authorization:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
+	Sensitizers		

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - vapor	Calculation method
Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitization	Calculation method
Skin sensitization	Calculation method

Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
European Chemicals Agency (ECHA) (ECHA_API)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine’s PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision date 14-Dec-2022

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006
Disclaimer
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End of Safety Data Sheet