

# SAFETY DATA SHEET

PRODUCT NAME	<b>KEM AQUA Solvent SA</b>	Data of issue	6/11/2018
		Date of revision/ Last confirmation	10/9/2024

## 1. Identification of the substance or mixture and the supplier

Product name	KEM AQUA Solvent SA
SDS No.	GHS-0069E
Name of supplier	Kyoto Electronics Manufacturing Co., Ltd.
Address	68 Ninodan-cho, Shinden, Kisshoin, Minami-ku, Kyoto, Japan
Division	Quality Assurance Department
Phone	+81-75-691-4121
Fax	+81-75-691-4127
Recommended uses and restrictions on use	
Recommended use	For analysis
Restrictions on use	When using for purposes other than those recommended, consult a specialist.

## 2. Hazard identification

GHS classification

Physical hazards	
Flammable liquids	Category 2
Health hazards	
Serious eye damage / Eye irritation	Category 2B
Reproductive toxicity	Category 1B
Specific target organ toxicity (single exposure)	Category 1(Central nervous system, Visual organs, Systemic toxicity)
	Category 3(Narcotic effects)
Specific target organ toxicity (repeated exposure)	Category 1(Central nervous system, Visual organs)

GHS label elements

Hazard pictograms



Signal words

Danger

## Hazard statements

H225 Highly flammable liquid and vapor.  
H320 Causes eye irritation.  
H336 May cause drowsiness or dizziness.  
H360 May damage fertility or the unborn child.  
H370 Causes damage to organs (respiratory organ).  
H372 Causes damage to organs (thyroid gland) through prolonged or repeated exposure.

## Precautionary statement

## Prevention

P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P233 Keep container tightly closed.  
P240 Ground and bond container and receiving equipment.  
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.  
P242 Use non-sparking tools.  
P243 Take action to prevent static discharges.  
P260 Do not breathe mist or vapors.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

## Response

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.  
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ 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.  
P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor.  
P337 + P313 If eye irritation persists: Get medical advice/



Causes damage to organs.

Causes damage to organs through prolonged or repeated exposure.

Notes to physician

Treat symptomatically.

## 5. Fire-fighting measures

Suitable extinguishing media	Carbon dioxide (CO <sub>2</sub> ) Dry sand Regular foam Vermiculite
Unsuitable extinguishing media	High volume water jet
Specific hazards during fire fighting	Do not allow run-off from fire fighting to enter drains or water courses.
Specific extinguishing methods	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 fire-fighters	Use personal protective equipment.

## 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Use personal protective equipment. Remove all sources of ignition.
Environmental precautions	Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

## 7. Handling and storage

Handling

Advice on protection against fire and explosion	Do not spray on a naked flame or any incandescent material. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use only explosion-proof equipment.
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Keep away from open flames, hot surfaces and sources of ignition.

Advice on safe handling	<p>Take precautionary measures against static discharges.</p> <p>Keep away from fire, sparks and heated surfaces.</p> <p>Wash skin thoroughly after handling.</p> <p>Do not eat, drink or smoke when using this product.</p> <p>Use only in area provided with appropriate exhaust ventilation.</p>
Avoidance of contact	No data available
Hygiene measures	<p>When using do not eat or drink.</p> <p>When using do not smoke.</p> <p>Wash hands before breaks and at the end of workday.</p>

**Storage**

Conditions for safe storage	<p>Keep in a well-ventilated place.</p> <p>Store at room temperature.</p> <p>To maintain product quality, do not store in heat or direct sunlight.</p> <p>Keep container tightly closed.</p>
Further information on storage stability	No decomposition if stored and applied as directed.

## 8. Exposure controls/Personal protection

Threshold limit value and permissible exposure limits for each component in the work environment

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Reference concentration / Permissible concentration	Basis
formamide	75-12-7	TWA	1 ppm	ACGIH
methanol	67-56-1	ACL	200 ppm	JP OEL ISHL
		OEL-M	200 ppm	JP OEL JSOH
		Further information: Group 2: Substances presumed to cause reproductive toxicity in humans, Skin absorption		
		TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH

**Personal protective equipment**

Respiratory protection	Suitable respiratory equipment
Hand protection material	Protective gloves
Eye protection	Safety glasses

Skin and body protection      Protective suit

## 9. Physical and chemical properties

Physical state	Liquid.
Color	colorless, light yellow, transparent
Odor	Pungent
Melting point / Freezing point	No data available
Initial boiling point and boiling range	No data available
Flammability (liquids)	No data available
Lower explosion limit and upper explosion limit / flammability limit	
Upper explosion limit / Upper flammability limit	No data available
Lower explosion limit / Lower flammability limit	No data available
Flash point	19.4 °C
Self-ignition	No data available
Decomposition temperature	No data available
pH	No data available
Autoignition temperature	No data available
Self-Accelerating decomposition temperature (SADT)	No data available
Viscosity	
Viscosity, kinematic	1.96 mm <sup>2</sup> /s
Solubility(ies)	
Water solubility	completely soluble
Solubility in other solvents	No data available
Partition coefficient: n-octanol/water	No data available
Vapor pressure	No data available
Density and / or relative density Relative density	1.024 (20 °C)
Density	No data available
Relative vapor density	No data available
Particle characteristics Particle size	No data available

## 10. Stability and reactivity

Reactivity	No decomposition if stored and applied as directed.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	No decomposition if stored and applied as directed.
Conditions to avoid	No data available

Incompatible materials	No data available
Hazardous decomposition products	No data available

## 11. Toxicological information

Acute toxicity	Not classified based on available information.
Product	
Acute oral toxicity	Acute toxicity estimate 2,000 mg/kg (Calculation method)
formamidel	
Acute oral toxicity	LD50 (Rat) 3,200 mg/kg
Acute inhalation toxicity	LC50 (Rat) 21 mg/L, Exposure time 4 h, Test atmosphere dust / mist
Acute dermal toxicity	LD50 (Rat) 3,000 mg/kg
methanol	
Acute oral toxicity	LD50 1,400mg/kg
Acute inhalation toxicity	LC50 (Rat) 64,000 ppm, Exposure time 4 h, Test atmosphere vapor LC50 (Rat) 145,000 ppm, Exposure time 1 h, Test atmosphere dust / mist
Acute dermal toxicity	LDLo 393mg/kg
Skin corrosion/irritation	Not classified based on available information.
Product	May cause skin irritation in susceptible persons.
Serious eye damage/eye irritation	Causes eye irritation.
Product	Vapors may cause irritation to the eyes, respiratory system and the skin.
formamide	Causes eye irritation.
methanol	Causes eye irritation.
Respiratory or skin sensitization	
Skin sensitization	Not classified based on available information.
Respiratory sensitization	Not classified based on available information.
Germ cell mutagenicity	Not classified based on available information.
Carcinogenicity	Not classified based on available information.
Reproductive toxicity	May damage fertility or the unborn child.
formamide	Presumed human reproductive toxicant
methanol	Presumed human reproductive toxicant
STOT-single exposure	May cause drowsiness or dizziness. Causes damage to organs (Central nervous system, Visual organs, Systemic toxicity).
methanol	Target Organs Systemic toxicity, Central nervous system, Visual organs The substance or mixture is classified as specific target organ toxicant, single exposure, category 1. The substance or mixture is classified as specific target organ toxicant, single

	exposure, category 3 with narcotic effects.
STOT-repeated exposure	Causes damage to organs (Central nervous system, Visual organs) through prolonged or repeated exposure.
methanol	Target Organs Central nervous system, Visual organs The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.
Aspiration toxicity	Not classified based on available information.
Remarks	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Concentrations substantially above the TLV value may cause narcotic effects. Solvents may degrease the skin.

## 12. Ecological information

Ecotoxicity	
formamide	
Toxicity to fish	LC50 ( <i>Oryzias latipes</i> (Japanese medaka)) >100 mg/L, Exposure time 96 h
Toxicity to daphnia and other aquatic invertebrates	EC50 ( <i>Daphnia magna</i> (Water flea)) > 500 mg/L, Exposure time 48 h
Toxicity to algae/aquatic plants	EC50 ( <i>Pseudokirchneriella subcapitata</i> (green algae)) > 1,000 mg/L, Exposure time 72 h NOEC ( <i>Pseudokirchneriella subcapitata</i> (green algae)) >10 mg/L, Exposure time 72 h
methanol	
Toxicity to fish	LC50 ( <i>Lepomis macrochirus</i> (Bluegill sunfish)) 15,400 mg/L, Exposure time 96 h
Toxicity to daphnia and other aquatic invertebrates	EC50 ( <i>Daphnia magna</i> (Water flea)) > 10,000 mg/L, Exposure time 48 h
Toxicity to algae/aquatic plants	EC50 ( <i>Chaetoceros calcitrans</i> ) > 10,000 - < 20,000 mg/L, Exposure time 96 h
Toxicity to fish (Chronic toxicity)	NOEC ( <i>Oreochromis mossambicus</i> ) 23.75 mg/L, End point Growth inhibition Exposure time 90 Days
Persistence and degradability	
Biodegradability	
formamide	rapidly biodegradable, Biodegradation 99 %, Exposure time 28 d (IECD Test Guideline 301A)
methanol	Biochemical oxygen demand rapidly biodegradable, Biodegradation 92 %, Exposure time 14 d



Bioaccumulative potential

Bioaccumulation

methanol                      Species    Cyprinus carpio (Carp), Bioconcentration factor (BCF) < 10, Exposure time:  
72 h  
Partition coefficient: n-octanol/water    log Pow = - 0.77

Mobility in soil                      No data available

Hazardous to the ozone layer                      Not applicable

layer

Other adverse effects                      No data available

### 13. Disposal considerations

aste from residues    Can be incinerated, when in compliance with local regulations.  
Send to a licensed waste management company.

Contaminated                      Empty remaining contents.

packaging                      Empty containers should be taken to an approved waste handling site for recycling or disposal.  
Dispose of contents/ container to an approved waste disposal plant.

### 14. Transport information

International Regulations

IATA-DGR

UN / ID No.	UN1230
Proper shipping name	Methanol (solution)
Class	3
Subsidiary risk	6.1
Packing group	II
Labels	Flammable Liquids, Toxic
Packing instruction (cargo aircraft)	364
Packing instruction (passenger aircraft)	352

IMDG-Code

UN No.	UN1230
Proper shipping name	METHANOL (solution)
Class	3
Subsidiary risk	6.1
Packing group	II
Labels	3 (6.1)

EmS Code F-E, S-D

Marine pollutant no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

Please refer to the law and local regulations, etc. in each country

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

## 15. Regulatory information

## 16. Other information

### Citations/References

NITE-Gmiccs (National Institute of Technology and Evaluation)

NITE-CHRIP (National Institute of Technology and Evaluation)

Workplace Safety Site (Ministry of Health, Labor and Welfare)

SDS from various upstream manufacturers

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