

GHS-0070E

SAFETY DATA SHEET

PRODUCT NAME KEM AQUA Anolyte AO

Data of issue 06/26/2012

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1 Identification of the substance or mixture and the supplier

Product name: KEM AQUA Anolyte AO
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
Emergency phone No.: +81-75-691-4125
MSDS No. GHS-0070E

2 Hazard identification

GHS hazard class and category

Physical hazards;	Flammable liquids:	Category 2
	Pyrophoric liquids:	Not classified
Health hazards;	Acute toxicity (oral):	Category 4 or more
	Skin corrosion/irritation:	Category 1A or more
	Eye damage/irritation:	Category 1 or more
	Sensitization Respiratory or Skin:	Category 1(Skin)
	Germ cell mutagenicity:	Category 2 or more
	Carcinogenicity:	Category 2 or more
	Toxic to reproduction:	Category 1
	Specific target organ systemic toxicity (single exposure):	Category 1 (Central nervous system, Visual organ, Systemic toxicity, Respiratory tracts, Liver, Kidney)
		Category 3 (Narcotic)
		Category 1 (Central nervous system, Visual organ, Thyroid gland, Respiratory tracts, Liver, Kidney)
Environmental hazards;	hazardous to the aquatic environment -Acute hazard:	Category 2 or more
	hazardous to the aquatic environment -Cronic hazard	Category 2 or more

GHS-0070E

Other hazard identification are not shown above because of the reasons below;
 Not applicable / Classification not possible

Label elements

Pictogram



Signal word:

Danger

Hazard statements:

Highly flammable liquid and vapour
 Toxic swallowed
 Causes severe skin burns and eye damage
 May cause an allergic skin reaction
 Suspected of causing genetic defects
 Suspected of causing cancer
 May damage fertility or the unborn child
 Cause damage to organs (Central nervous system, Visual organ, Systemic toxicity, Respiratory tracts, Liver, Kidney)
 May cause respiratory irritation; or May cause drowsiness and dizziness
 Cause damage to organs (Central nervous system, Visual organ, Thyroid gland, Respiratory tracts, Liver, Kidney) through prolonged or repeated exposure
 Toxic to aquatic life
 Toxic to aquatic life with long lasting effects

Precautionary statements:

Prevention

Keep container tightly closed. Keep away from ignition sources such as heat/sparks/open flame. –No smoking. Wear protective gloves/clothing/eye/face protection. Ground/bond container and receiving equipment. Use explosion–proof. Take precautionary measures against static discharge. Use only non–sparking tools.
 Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.
 Contaminated work clothing should not be allowed out of the workplace.
 Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
 Do not breathing dust/fume/gas/mist/vapours/spray.
 Use only outdoors or in a well–ventilated area.
 Avoid release to the environment.

Response	<p>In case of fire, use for extinction appropriate media.</p> <p>IF SWALLOWED: Immediately call POISON CENTRE or doctor/physician. Rinse mouth. Do NOT induce vomiting.</p> <p>IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If skin irritation or rash occurs, seek medical advice/attention.</p> <p>IF IN EYE: Rinse cautiously with water for several minutes. Remove contact lenses. If present and easy to do. Continue rinsing. Immediately call a POISON CENTRE or doctor/physician.</p> <p>IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTRE or doctor/physician.</p> <p>If exposed or concerned: Get medical attention/ advice.</p> <p>Get medical attention/advice if you feel unwell.</p> <p>Collect spillage.</p>
Storage	<p>Store locked up.</p> <p>Store in cool/well-ventilated place.</p>
Disposal	<p>Dispose of contents and container in accordance with regulation.</p>

3 Composition/Information on ingredients

Substance/Mixture: Mixture

Ingredient name	Composition (%)	Chemical formula	CAS No.
Chloroform	30-40	CHCl ₃	67-66-3
Methanol	30-40	CH ₃ OH	67-56-1
Iodine	1-5	I ₂	7553-56-2
Sulfur dioxide	3-8	SO ₂	7446-09-5
4-Dimethylaminopyridine	5-15	C ₇ H ₁₀ N ₂	1122-58-3
Propylene glycol	10-20	C ₃ H ₈ O ₂	57-55-6
1,3-Di (2-pyridyl)propane	5-15	C ₁₃ H ₁₄ N ₂	15937-81-2

4 First-aid measures

Inhalation:	Move victim to fresh air. If irritation persists, transport to a hospital immediately.
Skin contact:	Wash affected area with soap and water. Get medical attention if irritation occurs.
Eye contact:	In case of contact with eyes, irrigate with water for 15 minutes, carefully separating the eyelids to ensure that water reaches all parts. Seek medical advice, especially if irritation occurs or symptoms persist.
Ingestion:	Rinse mouth, give plenty of water to dilute the substance. Transport to a hospital immediately.
Most important symptoms:	No specific remarks.

	Protections for first-aid persons:	In case of first-aid, rescuer should wear proper protections according to situations.
5	Fire-fighting measures	
	Extinguishing media:	Carbon dioxide, dry chemical powder, alcohol resistant foam, water
	Incompatible extinguishing media:	Pressurized water
	Specific hazards arising from the chemical (and with regard to fire-fighting measures):	When burned, product forms smoke and toxic fumes, gases or vapours.
	Specific fire-fighting measures:	Fight the fire from a windward direction.
	Special protective equipment and precautions for fire-fighters:	Fire fighters should wear an approved self-contained breathing apparatus and full protective clothing.
6	Accidental release measures	
	Personal precautions, protective equipment and emergency procedures:	Wear proper protective equipment. If indoors, keep the area ventilated in use. If outdoors, must be used at windward side. Let the person evacuate from downwind side.
	Environmental precautions:	Attention should be given not to cause damage to the environment by flowing of spillage to rivers.
	Measures and materials for containment and clean up:	In case of leakage, collect in an airtight container and dispose of it properly as industrial waste.
7	Handling and storage	
	Precautions for safe handling:	
	Countermeasure technique(s):	Use only in well-closed facilities or local exhaust area. Remove sources of sparks and ignition. Take precautionary measures against static discharges.
	Preventive measures:	The working area must be ventilated well in use. Emitted vapour or dust must not be breathed.
	Safety measures/ incompatibility:	Do not shock, overturn, drop, or drag containers.
	Conditions for safe storage, including any incompatibilities:	
	Recommendation for storage:	Keep away from direct sunlight. Must be stored indoors. The room must be kept well-ventilated. Must be stored under room temperature. In case of storage, air tightened container must be used.
	Recommendation on container and packaging materials:	Glass
8	Exposure controls/Personal protection	
	Appropriate engineering controls:	Keep source tightly closed or install local exhaust ventilation. Provide shower and vanity unit nearby and make clear the location of these.

	Chloroform	Methanol	Iodine	Sulfur dioxide
Control value	3ppm	200ppm	Not established.	Not established.
Adopted value ACGIH	TWA: 10ppm (2005)	TWA: 200ppm STEL: 250ppm(2004)	STEL: 0.1ppm (2004)	TWA: 2ppm STEL: 5ppm(2004)

Individual protection measures, such as personal protective equipment (PPE):

Respiratory protector:	Wear positive pressure self-contained breathing apparatus (SCBA). Respirator for organic vapour.
Hand protection:	Wear impervious glove made from chloroprene, as appropriate.
Eye/face protection:	Wear protective eyeglasses or chemical safety goggles.
Skin and body protector:	To prevent any contact, wear impervious clothing such as apron, boots, or whole-body suits made from chloroprene, as appropriate.

9 Physical and chemical properties

Appearance, color:	Clear liquid between light-yellow to reddish brown
Odor:	Chloroform odor, Characteristic odor
pH	No data available
Melting point/freezing point	No data available
Boiling point	No data available
Flash point	16.8C (T.C.C)
Auto-ignition temperature:	No data available
Upper/lower flammability or explosive limits:	No data available
Vapour pressure:	No data available
Vapour density (Air = 1):	No data available
Specific gravity (Density):	1.105 (20C)
Solubility	No data available
Octanol/water partition coefficient (log Pow)	No data available
Decomposition temperature:	No data available
Viscosity:	2.53cst (24C)

10 Stability and reactivity

Chemical stability:	Stable under normal storage conditions.
Possibility of hazardous reactions:	Flammable
Conditions to avoid:	Not specified
Incompatible materials:	No data available
Hazardous decomposition products:	No data available

11 Toxicological information

No data for this product. For reference, the information of each ingredient is as follows.

	Chloroform	Methanol	Iodine
Acute toxicity -oral LD50(mg/kg)	(rat) 635	(human) 1400	(rat) 14000
-skin	-	(rat) 7939	-
LC50(ppm)	-	(rabbit) 15800	-
Skin corrosion/irritation	Category1A-1C	Classification not possible	Category2
Eye damage/irritation	Category1	Category2A-2B (rabbit)	Category2A-2B
Respiratory or Skin Sensitization	Classification not possible	Classification not possible	Category1 (Skin)
Germ sell mutagenicity	Category2	Not classified	Classification not possible
Carcinogenicity	G2(IARC)	Classification not possible	Classification not possible
Toxic to reproduction	Category2	Category1B	Classification not possible
STOT- single exposure	Category1,Category3	Category1,Category3	Category3
STOT- repeated exposure	Category1	Category1	Category1
Asporation toxicity	Classification not possible	Classification not possible	Classification not possible
	Sulfur dioxide	4-Dimethylaminopyridine	Propylene glycol
Acute toxicity -oral LD50(mg/kg)	-	(rat) 250	>18000
-skin	-	-	20800
-inhalation LC50(ppm)	(rat) 965	-	-
Skin corrosion/irritation	Classification not possible	No data available	None
Eye damage/irritation	Category2A (human)	No data available	Mild
Respiratory or Skin Sensitization	Classification not possible	No data available	None(Skin)
Germ sell mutagenicity	Classification not possible	Negative	Negative
Carcinogenicity	A4(ACGIH)	-	-
Toxic to reproduction	Classification not possible	-	-
STOT- single exposure	Category1	-	-
STOT- repeated exposure	Category1	-	-
Asporation toxicity	Classification not possible	-	-

12 Ecological information

No data for this product. For reference, the information of each ingredient is as follows.

	Chloroform	Methanol	Iodine
Biotransportability	No data available	No data available	No data available
Persistence and degradability	Refractory (BOD:0%)	Degradable	No data available
Bioassumulative potential	No data available	No data available	No data available
Ecotoxicity LC50(mg/L)	1.24~2.03 (rainbow trout:96H)	901 (crustaces:24H)	0.16(crustaces:48H)
Fish toxicity	No data available	No data available	No data available

13 Disposal considerations

Contact a licensed professional waste disposal service to dispose of this material. Comply with all country, national and local regulations. Do not dump this product into sewers, on the ground or into any body of water.

14 Transport information

Basic classification information for the transporting/shipment:

UN Number:	1992
UN Proper shipping name:	Flammable liquid, toxic, n.o.s.
Class or Division:	3/6.1
Packing group:	II

Special precautions which a user needs to be aware of or needs to comply with in connection with transport or conveyance either within or outside their premises:

- Protection from direct sun light in transportation, and confirm the container does not leak.
- Carefully load it onto a transporter without dropping, overturning or damaging so that it will stably stays on the transporter.

15 Regulatory information

Follow all laws and regulations in your country.

16 Other information

Bibliography:



02/25/2015

NITE GHS-DB
RTECS
OECD-SIDS
NITE DB

Disclaimer

For R&D use only. Not for drug, household or other uses.

Warranty

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

GHS-0070E