

GHS-0073E

SAFETY DATA SHEET

PRODUCT NAME KEM AQUA Catholyte CGE

Data of issue 01/30/2012

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1 Identification of the substance or mixture and the supplier

Product name: KEM AQUA Catholyte CGE
Name of supplier: Kyoto Electronics Manufacturing Co., Ltd.
Address: 68 Ninodan-cho, Shinden, Kisshoin, Minami-ku, Kyoto, Japan
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MSDS No. GHS-0073E

2 Hazard identification

GHS hazard class and category

Physical hazards;	Flammable liquids:	Category 2
	Pyrophoric liquids:	Not classified
Health hazards;	Acute toxicity (oral):	Category 5
	Eye damage/irritation:	Category 2A 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, Heart, Kidney)
	Specific target organ systemic toxicity (repeated exposure):	Category 3 (Respiratory tract irritation, Narcotic effects)
Environmental hazards;	hazardous to the aquatic environment -Acute hazard:	Category 1 (Central nervous system, visual organ, Respiratory tracts, Heart)
	hazardous to the aquatic environment -Chronic hazard:	Not classified

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
 May be harmful if swallowed
 Causes serious eye irritation
 May damage fertility or the unborn child
 Cause damage to organs (Central nervous system, Visual organ, Systemic toxicity, Respiratory tracts, Heart, Kidney)
 May cause respiratory irritation; or May cause drowsiness and dizziness
 Cause damage to organs (Central nervous system, visual organ, Respiratory tracts, Heart) through prolonged or repeated exposure

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.
 Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
 Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Do not breathing dust/fume/gas/mist/vapours/spray.
 Use only outdoors or in a well–ventilated area.

Response

In case of fire, use for extinction appropriate media.
 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. Wash hands after handling.
 If exposed or concerned: Get medical attention/ advice.
 Get medical attention/advise if you feel unwell. IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

Storage

Store locked up.
 Store in cool/well–ventilated place.

Disposal

Dispose of contents and container in accordance with regulation.

3 Composition/Information on ingredients

Substance/Mixture: Mixture

Ingredient name	Composition (%)	Chemical formula	CAS No.
Ethylene glycol	30–40	C ₂ H ₆ O ₂	107–21–1
Methanol	20–30	CH ₃ OH	67–56–1
Choline chloride	30–40	C ₅ H ₁₄ NOCl	67–48–1

 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.

	Ethylene glycol	Methanol	Choline chloride
Control value	Not established.	200ppm	Not established.
Adopted value ACGIH(2004)	STEL(Ceiling): 100mg/m3(H)	TWA : 200ppm STEL : 250ppm	Not established.

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: Colorless and Clear liquid

Odor: Ethylene glycol odor

PH: No data available

Melting point/freezing point: No data available

Boiling point: No data available

Flash point: 21.1C (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): 1.016 (20C)

Solubility: Easily soluble in water

Octanol/water partition coefficient (log Pow): No data available

Decomposition temperature: No data available

Viscosity: 5.55cst (27.3C)

10 Stability and reactivity

Chemical stability: Stable under normal storage conditions.

Possibility of hazardous reactions: Highly flammable liquid and vapour

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.

	Ethylene glycol	Methanol	Choline chloride
Acute toxicity -oral LD50(mg/kg)	(rat) >=4000	(human) 1400	(rat) 3400
	-	(rat) 7939	-
-skin LC50(ppm)	(rat) 10600	(rabbit) 15800	-
Skin corrosion/irritation	Category3 mild (rabbit)	Classification not possible	Slightly
Eye damage/irritation	Category2B (rabbit)	Category2A-2B (rabbit)	Slightly
Respiratory or Skin Sensitization	Classification not possible	Classification not possible	-
Germ sell mutagenicity	Not classified	Not classified	Negative
Carcinogenicity	A4(ACGIH)	Classification not possible	-
Toxic to reproduction	Category1B	Category1B	No data available
STOT- single exposure	Category1	Category1,Category3	-
STOT- repeated exposure	Category1	Category1	-
Aspiration toxicity	Classification not possible	Classification not possible	-

12 Ecological information

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

	Ethylene glycol	Methanol	Choline chloride
Biotransportability	No data available	No data available	No data available
Persistence and degradability	Degradable (TOC: 100%)	Degradable	Degradable (TOC: 100%)
Bioassumulative potential	No data available	No data available	No data available
Ecotoxicity LC50(mg/L)	>100 (japanese killfish: 96H)	901 (crustaces: 24H)	>100 (japanese killfish: 96H)
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: 1230

UN Proper shipping name: Methanol mixture

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:

NITE GHS-DB

NITE DB

IUCLID

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.