SAFETY DATA SHEET

PRODUCT NAME **Cyclohexane**

Data of issue 30/1/2012

Date of revision/ Last confirmation 3/4/2025

1. Identification of the substance or mixture and the supplier

Product name	Cyclohexane
SDS No.	GHS-0056E
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	+81-75-691-4125

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	
Skin corrosion / Irritation	Category 2
Serious eye damage / Eye irritation	Category 2A
Specific target organ toxicity (single exposure)	Category 2(Vascular system)
	Category 3(Respiratory tract irritation)
	Category 3(Narcotic effects)
Environmental hazards	
Short-term (acute) aquatic hazard	Category 1
Long-term (chronic) aquatic hazard	Category 3

GHS label elements

Hazard pictograms

Signal word	Danger
Hazard statements	H225 Highly flammable liquid and vapor. H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H336 May cause drowsiness or dizziness. H371 May cause damage to organs (Vascular system). H400 Very toxic to aquatic life H412 Harmful to aquatic life with long lasting effects.
Precautionary statements	
Prevention	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. P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response	P302 + P352 IF ON SKIN: Wash with plenty of water. P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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. P312 Call a POISON CENTER/ doctor if you feel unwell. P321 Special treatment is required. P332 + P313 If skin irritation occurs: Get medical advice/ attention. P337 + P313 If eye irritation persists: Get medical advice/ attention. P362 + P364 Take off contaminated clothing and wash it before reuse. P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish. P391 Collect spillage.
Storage	P403 + P233 Store in a well-ventilated place. Keep container tightly closed. P403 + P235 Store in a well-ventilated place. Keep cool. P405 Store locked up.
Disposal	P501 Dispose of contents/ container to an approved waste disposal plant.
Other hazards which do not result in classification	None known.

3. Composition/Information on ingredients

substance / mixture substance

Components

No.	Chemical name	CAS No.	Concentration (% w/w)	ENCS / ISHL number
1	Cyclohexane	110-82-7	>=99.5	3-2233/232

4. First-aid measures

General advice	Move out of dangerous area. Show this material safety data sheet to the doctor in attendance. Do not leave the victim unattended.
If inhaled	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is weak or has stopped, loosen the person's clothing, keep the airway

	open, and administer artificial respiration. Call a doctor/physician if necessary.
In case of skin contact	Wash immediately with soap and plenty of water. Wash contaminated clothing before reuse. Remove contaminated clothing and shoes. Call a physician if necessary.
In case of eye contact	If in eyes, immediately flush with plenty of water for at least 15 minutes and seek medical attention. Protect uninjured eyes. Keep eyes wide open while rinsing. If eye irritation persists, consult a medical specialist. Remove contact lenses, if present and easy to do. Continue rinsing.
If swallowed	Rinse mouth. If swallowed, DO NOT induce vomiting.
Most important symptoms and effects, both acute and delayed	No data available
Notes to physician	Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media	Water Carbon dioxide (CO_2) Dry sand Regular foam
Unsuitable extinguishing media	High volume water jet
Specific hazards during fire fighting	In the event of a fire, pyrolysis or combustion may produce highly irritating and/or harmful gases. Fire water or dilution water may be toxic and/or corrosive and may cause pollution.
Specific extinguishing methods	Move the container to a safe place immediately. If it is impossible to move, spray water on the container and surrounding area to cool it down. Extinguishing work should be done from upwind. For early stages of fire, use powder, carbon dioxide, dry sand, etc. For large-scale fires, it is effective to cut off the air using foam extinguishing agents, etc.
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	Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Keep away from open flames, hot surfaces and sources of ignition.
Advice on safe handling	Take precautionary measures against static discharges. Keep away from fire, sparks and heated surfaces. Wash skin thoroughly after handling. Do not eat, drink or smoke when using this product. Use only in area provided with appropriate exhaust ventilation.
Avoidance of contact	Strong oxidizing agents
Hygiene measures	When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

Storage

Conditions for safe storage	Keep in a well-ventilated place. To maintain product quality, do not store in heat or direct sunlight. Keep container tightly closed.
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	Control parameters / Reference concentration /	Basis

		exposure)	Permissible concentration	
Cyclohexane	110-82-7		150 ppm 520 mg/m^3	JSOH
		TWA	100 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
Odor	Peculiar odor
Melting point / Freezing point	5.5 – 7.5 ℃
Initial boiling point and boiling range	81 ℃
Flammability (liquids)	No data available
Lower explosion limit and upper explosion limit / flammability limit	
Upper explosion limit / Upper flammability limit	1.3 vol%
Lower explosion limit / Lower flammability limit	8.4 vol%
Flash point	-18 ℃
Decomposition temperature	No data available
pH	No data available
Autoignition temperature	260 ℃
Self-Accelerating decomposition temperature (SADT)	No data available
Viscosity	
Viscosity, kinematic	No data available
Solubility(ies)	
Water solubility	0.0058 g/100 mL (25 ℃)
Solubility in other solvents	Easily soluble in ethanol and diethyl ether
Partition coefficient: n-octanol/water	3.4
Vapor pressure	10.3 kPa (20 ℃)
Density and / or relative density Relative density	0.8 g/cm^3 (20 ℃)
Relative vapor density	2.9
Particle characteristics Particle size	No data available

10. Stability and reactivity

Reactivity	No data available
Chemical stability	May be altered by light
Possibility of hazardous reactions	May react on contact with oxidizing agents.
Conditions to avoid	Avoid contact with sunlight, heat, and incompatible materials.
Incompatible materials	Strong oxidizing agents
Hazardous decomposition products	Carbon oxides

11. Toxicological information

Acute toxicity	
Acute oral toxicity	LD50(Rat) >5,000 mg/kg
Acute dermal toxicity	LD50(Rat) 2,000 mg/kg
Acute inhalation toxicity	LC50(Rat) ＞9,500 ppmV, Exposure time 4 h
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious 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	Not classified based on available information.
STOT-single exposure	May cause drowsiness or dizziness.
	May cause organ damage.
	May cause respiratory irritation.
STOT-repeated exposure	Not classified based on available information.
Aspiration toxicity	Not classified based on available information.
Remarks	No data available

12. Ecological information

Ecotoxicity	
Toxicity to daphnia and other aquatic invertebrates	EC50 (Daphnia magna) 0.9 mg/L, Exposure time 48 h
Toxicity to algae/aquatic plants	NOEC (Pseudokirchneriella subcapitata) 0.94 mg/L, Exposure time 72 h
Persistence and	Degradation rate over 28 days according to OECD test guideline 301 F 77%

degradability	(EU-RAR, 2004)
Bioaccumulation	No data available
Mobility in soil	No data available
Hazardous to the ozone layer	No data available
Other adverse effects	No data available

13. Disposal considerations

Waste from residues	Can be incinerated, when in compliance with local regulations. Send to a licensed waste management company.
Contaminated packaging	Empty remaining contents. 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.	UN1145
Proper shipping name	CYCLOHEXANE
Class	3
Packing group	Ⅱ

IMDG-Code

UN No.	UN1145
Proper shipping name	CYCLOHEXANE
Class	3
Packing group	Ⅱ
Marine pollutant	Applicable

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

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.