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Date of issue : 14 April, 2006

Date of revision: 17 December, 2018

## Safety Data Sheet

1. Product and company identification

Product name : p-Cymene

Name of manufacturer : KANTO CHEMICAL CO., INC.

Address : 2-1, Nihonbashi, Muromachi 2-Chome, Chuo-Ku, Tokyo, 103-0022, Japan

Name of section : Reagent division, catalog and products information section

Telephone number : +81-3-6214-1090Facsimile number : +81-3-3241-1047Mail address : BC32@gms, kanto, co. ip

SDS No. : 07569

2. Summary of danger and Hazard

GHS classification

Physical and chemical hazard

Flammable liquids : Category 3

Pyrophoric liquids : Out of category

Human health hazard

Acute toxicity(oral) : Out of category

Specific target organ systemic toxicity(single exposure)

: Category 3 (anesthetic action)

Environmental hazard

Hazardous to the aquatic environment-acute hazard

: Category 2

Hazardous to the aquatic environment-chronic hazard

: Category 3

Pictogram or symbol





Signal word : Warning

Hazard statement : Flammable liquid and vapor

May cause drowsiness and dizziness

Toxic to aquatic life

Harmful to aquatic life with long lasting effects

Cautions

Safety measurements : Keep away from ignition sources such as heat, sparks, or open flame.

Keep containers tightly closed.

Ground container and receiving equipment in case of transport and

stirring.

Use explosion-proof apparatus. Use only non-sparking tools.

Avoid breathing dust, mist, and vapor.



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Use only in a well-ventilated area.

Avoid release to the environment.

Wear appropriate protective gloves, glasses, clothing, face shield, or

mask.

First-aid measures : If inhaled : Remove victim to fresh air and keep at rest in a position

comfortable for breathing. Get medical treatment if you feel unwell.

If on skin: Remove contaminated clothing and the substance. Get

medical treatment, if you feel unwell.

Storage : Tightly container closed and store in a well-ventilated area.

Store locked up.

Disposal : Dispose of contents and containers appropriately in accordance with

related regulations.

3. Composition/Information on ingredients

Substance/Mixture : Substance

Chemical name or commercial name

: p-Cymene

Synonyms : 4-Isopropyltoluene

Ingredients and composition

: p-Cymene min. 98.0%

Chemical formula : CH3C6H4CH (CH3) 2

CAS No. : 99-87-6
TSCA Inventory : Registered
EINECS No. : 2027967
Dangerous and hazardous ingredients

: p-Cymene

4. First aid measures

Inhalation : Remove the victim to fresh air, and make him blow his nose and gargle.

Skin contact : Wash the affected areas under running water.

Eye contact : Wash the affected areas under running water for at least 15 minutes.

Get medical treatment.

Ingestion : Give the victim water or salt water and make him vomit. Get medical

attention.

Protection for first aid person

: Rescuers should wear proper protective equipment like rubber gloves,

goggles.

5. Fire fighting measures

Extinguishing media : Dry chemical powder, carbon dioxide, dry sand, foam

Prohibited extinguishing media

: Water spray

Particular fire fighting: Move containers from fire area if it can be done without risk, if not

possible, apply water from a safe distance to cool and protect

surrounding area.

Fight fire from windward.



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Dry chemical powder, carbon dioxide or dry sand should be used for small fires. Foam extinguisher is effective for a large scale fire.

Protection for firefighters

: Firefighters should wear protective equipment.

6. Accidental release measures

Cautions for personnel : Wear proper protective equipment and avoid contact with skin and

inhalation of vapor. Conduct operations from upwind and evacuate people downwind. Remove all sources of ignition. Keep away personnel except for authorized ones from spillage area by stretching ropes.

Cautions for environment : Attention should be given to avoid damage to the environment by

flowing of spillage to rivers.

Removal measure : Absorb spill with inert material (e.g., diatomaceous earth, sand) and

flush spillage area with copious amounts of water.

Prevention of second accident

: Remove nearby sources of ignition and prepare extinguishing media.

7. Cautions of handling and storage

Handling

Engineering measures : Wear proper protective equipment to avoid contact with skin or

inhalation of vapor. Pay attention to fire.

Cautions for safety handling

: Use with an enclosed system or a local exhaust ventilation. Use in

well-ventilated areas.

Storage

Adequate storage condition

: Store in a dark, cool place and tightly closed.

Safety adequate container materials

: Glass, fluorine resin, stainless steel

8. Exposure control/Personal protection

Engineering measures : Use with an enclosed system or a local exhaust ventilation.

Control parameters

ACGIH(2015) : Not established

Protective equipment

Respiration protective equipment

: If necessary, wear chemical cartridge respirator with an organic vapor

cartage

Hands protective equipment

: Organic solvents resistant gloves

Eyes protective equipment

: Safety goggles

Skin and body protective equipment

: Protective clothing, protective boots

9. Physical and chemical properties

Appearance : Liquid
Color : Colorless

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Odor : Characteristic odor

pH : Not available

Boiling point :  $177.1^{\circ}$ C

Melting point :  $-67.9^{\circ}$ C

Flash point :  $47.2^{\circ}$ C

Auto-ignition point :  $436.1^{\circ}$ C

Explosion characteristics

Explosion limit : upper : 5.6vol% lower : 0.7vol%

Vapor pressure : 2. 0hPa (25°C)

Vapor density : 4.6

Density : 0.857g/cm3 (20°C)

Solubility

Solubility in solvents : Water ; 0.034%

Organic solvents ; Soluble in ethanol, diethyl ether, acetone,

chloroform.

log Pow : 4.1

10. Stability and reactivity

Stability : Stable under normal conditions.

Reactivity : May react with oxidizing substances.

Incompatible conditions : Light, heat

Incompatible materials : Oxidizing substances

Hazardous decomposition products

: Carbon monoxide

11. Toxicological information

Acute toxicity : Oral : Out of category

Dermal: Not possible to classify because of insufficient data.

Inhalation(vapor) : Not possible to classify because of insufficient

data.

Inhalation(dust, mist) : Not possible to classify because of

insufficient data.

rat oral LD50=4750mg/kg

Skin corrosion/irritation: Not possible to classify because of insufficient data.

Serious eye damage/eye irritation

: Not possible to classify because of insufficient data.

Respiratory sensitization or Skin sensitization

: Respiratory sensitization : Not possible to classify because of

insufficient data.

Skin sensitization: Not possible to classify because of insufficient

data.

Mutagenicity : Not possible to classify because of insufficient data.

There is no in vivo data. As for in vitro, there is negative data on

reverse mutation test in bacteria.

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The substance is recognized to have mutagenicity by the Ministry of

Health, Labor and Welfare.

Carcinogenic effects : Not possible to classify because of insufficient data

Effects on the reproductive system

: Not possible to classify because of insufficient data.

Specific target organ systemic toxicity single exposure

: May cause drowsiness and dizziness (category 3)

Human studies have shown that oral ingestion of the substance caused headache, nausea, and vomiting. Animal studies have shown that in single oral studies in rats, lethal dose is 3,200mg/kg, which is higher than the guidance value range of category 2, signs of sedation, tremors, lethargy, and muscular weakness were observed prior to death, and necropsy revealed pulmonary congestion and hemorrhage, pulmonary emphysema, gastric and small intestinal hemorrhage, and hepatic congestion. In rats exposed by inhalation to saturated vapor for 5 hours (higher than the guidance value range of category 2), loss of balance, salivation, tremors, clonic convulsion, and staggering gaits were observed, but disappeared on the following day. Thus, it was

classified into category 3 (anesthetic actions).

Specific target organ systemic toxicity repeated exposure

: Not possible to classify because of insufficient data.

Aspiration hazard : Not possible to classify because of insufficient data.

12. Ecological information

Ecotoxicity

Fish toxicity : Toxic to aquatic life(category 2)

Harmful to aquatic life with long lasting effects (category 3)

Daphnia magna EC50=1.9mg/L/48H Daphnia magna NOEC=0.46mg/L/21-day

Persistence and degradability

: High biodegradability

88% by BOD

Bioaccumulative potential: It is expected to have bioconcentration.

Mobility in soil : It is expected to have low mobility in soil (Koc:1120).

13. Disposal consideration

Residual disposal : Burn in a chemical incinerator equipped with an afterburner and a

scrubber. Or entrust approved waste disposal companies with the

disposal.

Containers : In case of disposal of empty bottles, dispose bottles after removing

the content thoroughly.

14. Transport information

UN class : Class 3(Flammable liquids) P. G. III

UN number : 2046 Marine regulation information

UN No. : 2046
Proper shipping name : CYMENES

Class : 3 Sub risk : -

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Packing group : III

Marine pollutant : P

Aviation regulation information

LIN No : 2046

Proper shipping name : Cymenes

Class : 3
Sub risk : Packing group : III

15. Regulatory information

Ensure this material in compliance with federal requirements and

ensure conformity to local regulations.

16. Other information

References Dictionary of Organic Compounds, The society of Synthetic Organic

Chemistry, Kodansha Ltd. (1985)

Dangerous Properties of Industrial Materials, 6th ed. N. I. Sax Van

Nostrand Reinhold Company (1984)

Handbook of 16817 Chemical Products, The Chemical Daily Co. (2017)

The information contained herein is based on several references and the present state of our knowledge. However the SDS does not always cover all information about the product, handle the product carefully. The information is intended to ordinary usage, in case of particular handlings, conduct appropriate safety measurements. The information herein is only provision of information, and it does not represent a guarantee the properties of the product. The Safety Data Sheet (SDS) is prepared based on JIS Z7253, and it has the same required elements on the Material Safety Data Sheet (MSDS) which is prepared based on JIS Z7250:2010.