



SAFETY DATA SHEET

Manufacturer information	Company	GASTEC CORPORATION
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Product name Carbon monoxide Detector Tube No.1LKC

Hazards identification This detector tube , when based on GHS and JIS Z 7252(2019), is corresponded to an article. Under normal use conditions, emits only a small amount of chemical substances, for example, trace amounts of chemical substances, and can be handled as not showing physical and chemical hazards or health hazards to operators. Therefore, this product does not fall under the GHS classification standard.

Composition and information on ingredients Pretreatment tube :
A product made by impregnating aluminium oxide(<10%) and porous silica gels(<10%) with potassium dichromate(<1%), and sealing them in glass tubes.
Detector tube :
A product made by impregnating porous silica gels(5-15%) with oleum(<10%), selenium dioxide(<0.1%) and chromium(VI) oxide(<1%), and sealing them in glass tubes.

First-aid measures Eyes: If the filler enters the eye, immediately flush with plenty of water for at least 15 minutes and see a doctor.
Skin: If the filler comes into contact with the skin, immediately wash with soapy water and flush with plenty of water.
Inhalation: Not applicable.
Ingestion: If the filler is swallowed, rinse the mouth immediately and see a doctor.

Fire fighting measures No special measures are needed.

Accidental release measures If the detector tube is broken, wear appropriate protective equipment to prevent the filler from adhering to or inhaling the skin or eyes.

Handling and storage Handling When the ends of the detector tube are broken off to prevent injury, the detector tube is moved away from the eye. Do not touch with bare hands any cuts, fittings, or fillers in the event of breakage of the detector tube.
Storage Store in a cold/dark place

Exposure control and protection measures Not applicable.

Physical and chemical properties Appearance: A glass tube filled with reagents and sealed at both ends.
Flash point: Not applicable.
Ignition point: Not applicable.

Stability and reactivity Stability: Not applicable.
Reactivity: Not applicable.
Conditions to avoid: Direct sunlight, high temperature, freezing should be avoided.
Hazardous decomposition products: Not applicable.

Toxicological information Filled material is made by adsorbing a small amount of chemicals to aluminium oxide and porous silica gels, and there is no hazard information for this. The following describes the hazards to humans of the chemicals and carries as a pure substance.

Aluminium oxide:
 Acute toxicity:
 Oral—rat LD50:> 5,000 mg/kg (IUCLID,2000)
 Dermal—no data
 Inhalation(vapor)—no data
 Inhalation(dust,mist)—no data

Selenium dioxide:
 Acute toxicity:
 Oral—rat LD50: 48 mg Se/kg(SeO₂ equivalent : 67.5 mg/kg) (ATSDR,2003)
 Dermal—no data
 Inhalation(dust,mist)—no data

Oleum:
 Acute toxicity:
 Oral—no data
 Dermal—no data
 Inhalation(dust,mist)—ratInhalationLC50: 347ppm/1H
 (= 86.7ppm/4H = 0.63 mg/L/4H)
 (assuming mist)(RTECS,1995)

Sulfuric acid:
 Acute toxicity:
 Oral—rat LD50: 2140mg/kg(SIDS,2001)
 Dermal—no data
 Inhalation(dust,mist)—ratLC50(4-h exposure): 0.375mg/L(SIDS,2001)

Chromium(VI) oxide:
 Acute toxicity:
 Oral—rat LD50: 52-113mg/kg (EU-RAR,2005)
 Dermal—rabbit LD50: 30mg Cr (VI) /kg (CrO₃ equivalent : 57.7 mg/kg)
 (CICAD 78 ,2013 / ATSDR, 2012)
 Inhalation(dust,mist)—ratLC50(4-h exposure): 0.217mg/L (EU-RAR,2005)

Potassium dichromate:
 Acute toxicity:
 Oral—rat LD50: 17 mg/kg (female), 26 mg/kg (male) (ATSDR,2012)
 48 mg/kg (female), 74 mg/kg (male) (EU-RAR,2005)
 149 mg/kg (female), 177 mg/kg (male) (EHC 61,1988)
 Dermal—rabbit LD50: 403 mg/kg (male)(ATSDR,2012),
 1,150mg/kg (EU-RAR (2005))
 Inhalation(dust, mist)—ratLC50(4-h exposure): 0.099mg/L (EU-RAR,2005),
 0.029 mg/L (female),0.035 mg/L (male) (ATSDR,2012)

Ecological information	No data
Disposal considerations	Pretreatment tube contains 4.42mg of hexavalent chromium. Detector tube contains 0.51mg of selenium and 2.60mg of hexavalent chromium. Should be disposed properly in accordance with local regulations.
Transport information	Avoid breakage of the detector tube due to dropping, pressurization, bending, etc. UN number: Not applicable UN Classification: Not applicable IATA: Not applicable Poisonous and Deleterious Substances Control Law: Not applicable Fire Defense Law: Not applicable Marine Regulation Information: Not applicable
Japanese regulatory information	Industrial Safety and Health Law : Hazardous substance No.142, 189(Article 57-2)

Other information

References :

Chemical Risk Information Platform (CHRIP): NITE

Safety website in the workplace of the Ministry of Health, Labour and Welfare

This data sheet is provided to businesses that handle hazardous chemical products as reference information for ensuring safe handling. With reference to this, business operators are requested to understand that they need to take appropriate measures in accordance with the actual conditions of individual handling, etc. at their own responsibility, and then use them. This data sheet is prepared based on JIS Z 7253(2019). The contents of this report have been prepared based on the latest information as of the date of revision, but if new information is obtained, it may be added or corrected.

This data sheet is not a guarantee of safety.
