



SAFETY DATA SHEET

Manufacturer information	Company	GASTEC CORPORATION
	Address	8-8-6 Fukayanaka, Ayase-city, Kanagawa 252-1195, Japan
	Telephone	+81-467-79-3910
	FAX	+81-467-79-3979

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Product name Oxygen Detector Tube No.31E

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 A product made by impregnating aluminium oxide(10-20%) and porous silica gels(<10%) with titanium trichloride(5-10%) and copper sulfate pentahydrate(<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

Titanium trichloride:

Acute toxicity:

Oral—rat LD50:4300mg/kg(JPN-MOE(2010))
Dermal—rat no data available
Inhalation(dust,mist)—no data

Copper sulfate pentahydrate:

Acute toxicity:

Oral—rat LD50:960mg/kg (EHC200,1998)
Dermal—rat LD50 : >2000mg/kg (RTECS, 2006)
Inhalation(dust,mist)—no data

Ecological information

No data

Disposal considerations

This detector tube contains titanium trichloride. Titanium trichloride reacts with the oxygen in air, and turns into harmless titanium oxide promptly. Unused or unreacted black tube should be used with the same measurement procedure and dispose after checking the whole layer is turned white. 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.189, 379(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.
