

Technical Information
Material Safety Data Sheet

SDT-193_03E

SECTION 1		CHEMICAL PRODUCT AND COMPANY IDENTIFICATION	
MANUFACTURE'S NAME	TELEPHONE NUMBER	FACSIMILE NUMBER	
GASTEC CORPORATION	+81-467-79-3910	+81-467-79-3979	
ADDRESS			
8-8-6 Fukayanaka, Ayase-City, Kanagawa 252-1195, Japan			
REFERENCE NUMBER	DATE PREPARED		
SDT-193_03E	May 31, 2006		
PRODUCT NAME	Gas Detector Tube 2-Pentenenitrile Detector Tube No. 193		
SECTION 2		COMPOSITION/INFORMATION ON INGREDIENTS	
Pretreatment Tube: Porous Silica Gel (0.5 g) impregnated with Sulfuric Acid (5-20%), and Chromic Anhydride (<5%) in a glass tube. Detector Tube: Porous Silica Gel (0.2 g) impregnated with Polyhydric Alcohol (15-20%), Mercury (II) Chloride (<1%) in a glass tube.			
SECTION 3		HAZARDOUS IDENTIFICATION	
Not applicable			
SECTION 4		FIRST AID MEASURES	
Eye contact:	Wash eyes immediately with plenty of water for at least 15 minutes and see a doctor.		
Skin contact:	Wash affected area immediately with soap and plenty of water.		
Inhalation:	Not applicable		
Ingestion:	Rinse mouth immediately and see a doctor.		
SECTION 5		FIRE FIGHTING MEASURES	
None			
SECTION 6		ACCIDENTAL RELEASE MEASURES	
Not applicable			
SECTION 7		HANDLING AND STORAGE	
When breaking off the tube ends, keep away from eyes. Broken glass tubes should not be picked up with bare hands. Tubes should be stored in a cool and dark place.			
SECTION 8		EXPOSURE PROTECTION	
Not applicable			
SECTION 9		PHYSICAL AND CHEMICAL PROPERTIES	
Mercury (II) Chloride, Chromic Anhydride, Sulfuric Acid:			
Flash point:	Not available		
Autoignition point:	Not available		
Polyhydric Alcohol:			
Flash point:	116°C (tag sealing)		
Autoignition point:	402°C		

SECTION 10	STABILITY AND REACTIVITY
Mercury (II) Chloride:	
Stability:	Stable for heat and light.
Reactivity:	Not available
Condition to avoid:	Sunlight, Heat
Hazardous decomposition product:	Mercury oxide or chloride may be formed.
Polyhydric Alcohol:	
Stability:	Stable. Hygroscopic
Reactivity:	May cause explosion in contact with oxidant.
Condition to avoid:	Sunlight, Heat, Open flames, High temperature, Sparks, Static charge, Other ignition sources
Hazardous decomposition product:	Carbon monoxide may be formed.
Chromic anhydride:	
Stability:	Stable. Hygroscopic
Reactivity:	Strong oxidizers. Contact with organic agents or metal powder may cause expose by heat or shock. Contact with organic agents may cause fire.
Condition to avoid:	Sunlight, Heat
Hazardous decomposition product:	Not available
Sulfuric acid:	
Stability:	Stable. Absorb moisture powerfully from the air.
Reactivity:	React violently with water to evolve heat and may spatter. Bite into metals and concrete caused by oxidation. Carbonize to flammable organic materials
Condition to avoid:	Sunlight, Heat, Moisture
Material to avoid:	Organic materials, Reducing agents, Metals
Hazardous decomposition product:	Sulfur oxides may be formed

SECTION 11	TOXICOLOGICAL INFORMATION
Mercury (II) Chloride:	
Acute toxicity data:	LCL0: (ihl, human): 300mg/m ³ /10 min. LD50: (orl, rat): 1mg/kg LDL0: (iv, dog): 2710 μg/kg LD50: (ip, mouse): 7165 μg/kg
Irritation data:	Skin; rabbit; 500mg/24h; severe Eye; rabbit; 50mg/24h; severe
Mutagenicity:	Chromosomal aberration test; hamster; wbc: 50 μmol/L DNA; damage; hamster; ovarian: 2500nmol/L DNA; inhibition; mouse; wbc: 100nmol/L dominant lethal gene test: rat; orl: 250mg/kg
Carcinogen:	Not available
Polyhydric Alcohol:	
Acute toxicity data:	TCL0: (ihl, mouse): 10000mg/m ³ ; watering eye, cough, breathing problem LD50: (orl, rat): 1mg/kg LDL0: (iv, rat): 2800mg/kg LD50: (skn, rabbit): 9530mg/kg

Irritation data: Skin; rabbit; 555mg; open system; minor
 Eye; rabbit; 100mg/lh; minor

Mutagenicity: DNA; inhibition; human; lymphocyte; 320mmol/L

Teratogenicity: TDLo: (orl, mouse): 7500mg/kg; (6-15 D preg) embryotoxicity;
 abnormal musculoskeletal

Carcinogen: OSHA: Not listed
 NTP: Not listed
 IARC: Not listed

Chromic anhydride:
 Acute toxicity data: LD50 (ip, rat): 58400 μ g/kg (RTECS)
 LD50 (iv, rat): 9260 μ g/kg (RTECS)
 LD50 (orl, mouse): 127mg/kg (RTECS)
 LD50 (ip, mouse): 14mg/kg (RTECS)
 LDLo (sc, mouse): 20mg/kg (RTECS)
 LD50 (iv, mouse): 17100 μ g/kg (RTECS)

Irritation data: Not available

Mutagenicity: Not available

Carcinogen: as Hexavalent chromium;
 NTP: K (Prospective human carcinogen)
 IARC: Group 1 (Human carcinogen)
 ACGIH: A1 (Known to be carcinogen)
 Japan Society for Occupational Health: Group 1 (Human carcinogen)

Sulfuric acid
 Acute toxicity data: LD50 (orl, rat): 2140mg/kg
 LC50 (ihl, cavy): 18mg/m³

Irritation data: Eye; rabbit; 1380 μ g; severe

Mutagenicity: Not available

Carcinogen: Not available

SECTION 12 ECOLOGICAL INFORMATION

Mercury (II) Chloride, Polyhydric Alcohol, Sulfuric Acid:
 Not available

Chromic anhydride:
 Biodegradability: Not available

Bioaccumulation Potential: Concentration scale factor (BCF); 4.6-15 (concentration, 100 μ g/l);
 14-21 (concentration, 20 μ g/l); 11-43 (concentration 5 μ g/l); 16-72
 (concentration 94-242 μ g/l)

Aquatic toxicity: LC50 (killifish): 82mg/l/48H

SECTION 13 DISPOSAL CONSIDERATION

This pretreatment tube contains 3.47mg of Hexavalent chromium.
 This detector tube contains 0.59mg of inorganic mercury.
 Dispose of in accordance with all applicable laws and regulations.
 (Contact local environmental agency for specific rules.)

SECTION 14 TRANSPORT INFORMATION

Breakage of tubes caused by drops, high pressure or bends should be avoided.

SECTION 15 REGULATORY INFORMATION

Not applicable

SECTION 16 OTHER INFORMATION

No specific notes

