

**Technical Information**  
**Material Safety Data Sheet**

SDT-501\_08E

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<b>SECTION 1</b>			<b>CHEMICAL PRODUCT AND COMPANY IDENTIFICATION</b>		
<b>MANUFACTURE'S NAME</b>	<b>TELEPHONE NUMBER</b>	<b>FACSIMILE NUMBER</b>			
GASTEC CORPORATION	+81-467-79-3910	+81-467-79-3979			
<b>ADDRESS</b>					
8-8-6 Fukayanaka, Ayase-City, Kanagawa 252-1195, Japan					
<b>REFERENCE NUMBER</b>			<b>DATE PREPARED</b>		
SDT-501_08E			May 6, 2015		
<b>PRODUCT NAME</b>		Smoke Tester Tube No. 501			

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<b>SECTION 2</b>		<b>COMPOSITION/INFORMATION ON INGREDIENTS</b>			
		Porous Silica Gel (0.8 g) impregnated with Tin(IV) Chloride (80-90%) in a glass tube.			
Chemical Name:		Tin(IV) Chloride:			
Formula:		SnCl <sub>4</sub>			
Notification number:		Law Concerning Examination and Regulation of Manufacture and Handling of Chemical Substances;			
		1-260			
CAS Number:		7646-78-8			
UN Number:		1827			

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<b>SECTION 3</b>		<b>HAZARDOUS IDENTIFICATION</b>			
GHS label elements:		Void			
Tin(IV) Chloride:					
Classification name:		Acute toxicity substance, Corrosive substance			
Hazardous nature:		Nonflammable. When dissolve in water, generate heat and emit hazardous hydrogen chloride.			
Hazardous property:		Irritating to skin and eyes may cause inflammation. Irritating to respiratory system if inhaled .			
Environmental impact:		Harmful for aquatic organism.			

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<b>SECTION 4</b>		<b>FIRST AID MEASURES</b>			
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:		Gargle immediately and see a doctor. If breathing is difficult or has stopped, administer artificial respiration and transport to a hospital.			
Ingestion:		Rinse mouth immediately and see a doctor.			

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<b>SECTION 5</b>		<b>FIRE FIGHTING MEASURES</b>			
Toxic substance:		Hazardous hydrogen chloride is evolved when heated.			
Methods for extinction:		Remove the tube to a safe place. If not possible to remove, sprinkle water around the tube and cool off. Avoid exposing water to the inside of the tube.			
Protective equipment:		Required.			

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**SECTION 6****ACCIDENTAL RELEASE MEASURES**

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In case of damage, smoke is emitted on contact with moisture in the air and hazardous hydrogen chloride is evolved. Personnel has to evacuate from the area and move upwind. Wear suitable protection. Avoid contact with skin or inhalation of vapor. Put all filling agents in a container and add aqueous solution of calcium hydroxide or soda ash, then discard.

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**SECTION 7****HANDLING AND STORAGE**

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Handling:

Avoid inhale white smoke generated from the tube. The white smoke is included hazardous hydrogen chloride and irritating to mucous membrane of nose or throat and may cause a cough.

Do not use near precision instruments or electronic products may cause corrosion.

Do not use in a room with no ventilation. Clear the air adequately during use. Do not generate white smoke directly into a person's face.

When breaking off the tube ends, keep away from eyes, wear the gloves and protective glasses.

Broken glass tubes should not be picked up with bare hands.

Storage:

Tubes should be stored in a cool and dark place.

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**SECTION 8****EXPOSURE PROTECTION**

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Standard control concentration:

Tin(IV) Chloride: Not applicable

Hydrogen chloride: Not applicable

Threshold limit value: Japan Society for Occupational Health (2004):

Tin(IV) Chloride: Not applicable

Hydrogen chloride: 5ppm (maximum allowable concentration)

ACGIH (2004):

Tin(IV) Chloride: TLV-TWA 2mg/m<sup>3</sup> (as Sn, oxide and inorganic compound)

Hydrogen chloride: TLV-C 2ppm

Fixtures:

Local exhaust is necessary

Protective equipment:

Protective gloves, protective glasses, respirator for acidic gas

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**SECTION 9****PHYSICAL AND CHEMICAL PROPERTIES**

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Tin(IV) Chloride:

Boiling point: 114 °C

Flash point: Nonflammable

Melting point: React violently with water. Soluble in alcohol, benzene or toluene.

Hydrogen chloride:

Boiling point: -85 °C

Flash point: Nonflammable gas

Melting point: Soluble in water. (67g/100mL 30°C)

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**SECTION 10****STABILITY AND REACTIVITY**

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Tin(IV) Chloride:

Stability: Stable under normal circumstances.

Reactivity: React violently with water to evolve heat. Emit white smoke in contact with moisture in the air.

Condition to avoid: Sunlight, Heat, Contact with water

Hazardous decomposition product: Chlorine or hydrogen chloride may be formed.

Hydrogen chloride:

Stability: Stable under normal circumstances.

Reactivity: Attacks many metals in the presence of water forming flammable/explosive gas (Hydrogen).

Condition to avoid: Hazardous decomposition product:	Emit white smoke in contact with moisture in the air. Reacts with Alkaline and metals. Corrosive. Contact with Oxidant, Alkaline and metals. Chlorine may be formed.
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<b>SECTION 11</b>	<b>TOXICOLOGICAL INFORMATION</b>
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Tin(IV) Chloride:	
Acute toxicity data:	Irritating to respiratory system if vapor is inhaled. LC50 (ivn, mouse): 32mg/kg LD50 (ipr, rat): 41mg/kg
Irritation data:	Eye; Irritating severely to mucous membrane.
Mutagenicity:	Chromosome aberration; human (in vivo); positive
Teratogenicity:	Not available
Reproductive toxicity:	Not available
Carcinogen:	Not listed in IARC or NTP
Hydrogen chloride	
Acute toxicity data:	Severely Irritating to mucous membrane of nose or throat. LC50 (ihl, mouse): 1108ppm/1H LD50 (ipr, mouse): 1449ppm/kg LCL0 (ihl, cavy): 4413ppm/30min.) LCL0 (ihl, human): 1300ppm/30min.) LCL0 (ihl, human): 3000ppm/5min.)

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<b>SECTION 12</b>	<b>ECOLOGICAL INFORMATION</b>
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Tin(IV) Chloride:	
Ambulatory:	Not available
Biodegradability:	Not available
Bioaccumulation potential:	Not available
Aquatic toxicity:	Fish; LFD 100-1000ppm
Hydrogen chloride:	
Ambulatory:	Not available
Biodegradability:	Not available
Bioaccumulation potential:	Not available
Aquatic toxicity:	Highly toxic for aquatic organisms. Category : 1

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<b>SECTION 13</b>	<b>DISPOSAL CONSIDERATION</b>
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If the reagent is still in the glass tube, may react with moisture in the air to evolve hydrogen chloride. Dispose of contact with water. Dispose of in accordance with all applicable laws and regulations. (Contact local environmental agency for specific rules.)

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<b>SECTION 14</b>	<b>TRANSPORT INFORMATION</b>
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Breakage of tubes caused by drops, high pressure or bends should be avoided.

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<b>SECTION 15</b>	<b>REGULATORY INFORMATION</b>
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Japan Regulations: Tin(IV) Chloride	
Poisonous and Deleterious Substances Control Law:	Listed as deleterious substance
Industrial Safety and Health Law:	57-2 (18-2) No. 322
Hazardous Materials Regulation Law:	3-3
Aviation Law:	194-11
PRTR:	Not applicable

Japan Regulations: Hydrogen chloride	
Poisonous and Deleterious Substances Control Law:	Listed as deleterious substance
Industrial Safety and Health Law:	57-2 (18-2) No. 98
Hazardous Materials Regulation Law:	3-1
Aviation Law:	194-1
PRTR:	Not applicable

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**SECTION 16****OTHER INFORMATION**

Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use.