

*Read this MSDS before use the ingredients .

*Keep this MSDS in your file for your timely reference.

*The contents of this information sheet are not warranted and the company can accept no liability to any customer or any other person.

Material Safety Data Sheet “ Antimony Pentachloride ”

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Identification of Substance:	Antimony Pentachloride SbCl ₅ CAS No.7647-18-9 EINECS No.231-601-8
1.2 Company Identification:	NIHON SEIKO CO., LTD. 3-2 SHIMOMIYABI-CHO SHINJUKU-KU TOKYO 162-0822 JAPAN TEL +81-3-3235-0031 FAX +81-3-5261-7335

2. COMPOSITION/INFORMATION ON INGREDIENTS

2.1 Distinction of single substance or mixture:	Single substance
2.2 Chemical Composition:	Antimony Pentachloride SbCl ₅
2.3 Antimony Pentachloride SbCl ₅ :	99.0%

3. HAZARDS IDENTIFICATION

3.1 Title of Classification:	Acute toxic substance. Corrosive substance.
3.2 Potential Health Effects:	
Ingestion:	Moderate acute toxicity.
Skin Contact:	May cause strong irritation and damage of mucous membrane.
Eye Contact:	May cause damage of mucous membrane and loss of eyesight.
Inhalation:	May cause irritation of the upper respiratory tract by inhalation of hydrogen chloride and antimony oxchloride. Sometimes cause vomiting, stomachache and loss of appetite.
3.3 Environmental Effects:	No information available.
3.4 Specific Hazard	Occur hydrolysis by reacting with water and generate toxic and irritant gas of antimony oxychloride and hydrogen chloride.

4. FIRST AID MEASURES

- 4.1 Skin Contact: Wash affected skins area thoroughly with plenty of water or tepid water, and soap. Get medical care if necessary.
- 4.2 Eye Contact: Flush eyes with plenty of water for at least 15 minutes. Get medical care from an ophthalmologist soon.
- 4.3 Inhalation: Immediately move to fresh air. Loosen clothing and tuck upon a blanket for warming. Wash nostrils with plenty of water. Get medical care soon.
- 4.4 Ingestion: Rinse the mouth with plenty of water and induce vomiting if possible. Get medical care soon.

5. FIRE FIGHTING MEASURES

- 5.1 Extinguishing Media: Dry chemical, carbon dioxide and foam compound
- 5.2 Fire Fighting Measures: This material is not combustible, but may generate toxic gas by a flame. Cool containers on fire by water spray till fire is put out completely. Move containers from fire area if possible.
- 5.3 Protective Equipment for Fire-Fighters: (When smog is generated.) Use Protective clothes, Self-contained compressed air breathing apparatus, Circuit self-contained oxygen breathing apparatus, High rubber boots, Gas detecting tube (for chlorine, hydrogen chloride)

6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal Precautions: Use protective equipment. Do not work in leeward.
- 6.2 Environmental Precautions: Do not flush the leaked liquid directly in water.
- 6.3 Methods of Cleaning Up: The spill dams up the flow because of earth and sand. Recover spills into a vacant container. The neutralizing processing is gradually done by using the solution of slaked lime or the soda ash and flush spill area with plenty water. Do not empty into drains for environmental preservation.
- 6.4 Prevention plan of secondary disaster The person in leeward is saved. It stretches a rope around the spill area, and the person's going in and out is prohibited.

7. HANDLING AND STORAGE

- 7.1 Precautions during Handling: Wash thoroughly after handling.
Wash hands before eating.
Remove contaminated clothing and wash before reuse.
Use only in a well-ventilated area.
Do not get in eyes, on skin, or on clothing.
Keep container tightly closed. Do not ingest or inhale.
Do not allow contact with water.
Discard contaminated shoes.
- 7.2 Storage: Store in a cool, dry place.
Store in a tightly closed container.
Keep under a nitrogen blanket.
Corrosives area. Water free area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 Exposure Control: ACGIH : 0.5mg (Sb) /m³ TWA
- 8.2 Personal Protective Equipment: Wear a gas mask for acid material, safety goggles, protective gloves, and protective boots to avoid exposure to this material.

9. PHYSICAL AND CHEMICAL PROPERTIES

- 9.1 Appearance: Yellow liquid, irritating odor.
- 9.2 Odor: Irritating odor.
- 9.3 Specific Gravity: 2.3 (20)
- 9.4 Melting Point: 2.8
- 9.5 Boiling Point: 140 (933Pa)
- 9.6 Solubility in Water: Reacts with water.
- 9.7 Vapor pressure: 133Pa (20)
- 9.8 Flammability: None Flammable.

10. STABILITY AND REACTIVITY

- 10.1 Stability: Fume in the air
- 10.2 Reactivity: Occur hydrolysis by reacting with water and generate toxic and irritant gas of antimony oxychloride and hydrogen chloride.

11. TOXICOLOGICAL INFORMATION	
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11.1 LD ₅₀ (Rat-oral) :	1,115mg/kg
11.2 Local Effect:	
Skin Corrosivity:	An extreme pain is caused, and the inflammation is caused.
Irritation:	Eyes, noses, throats, and mucous membranes such as bronchitis might be invaded seriously, and it become the lung edema and losing sight.
11.3 Carcinogenicity:	
Japanese Society of Occupational Health:	Not listed.
ACGIH:	Not listed.
EPA:	Not listed.
NTP:	Not listed.
EU:	Not listed.
IARC:	Not listed.

12. ECOLOGICAL INFORMATION	
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12.1 Ecological effects:	No information available.
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13. DISPOSAL CONSIDERATIONS	
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13.1 Sedimentation method:	<p>It melts in bags of water, aqueous sodium sulfide is added, antimony pentasulfide is precipitated, and it filters, it reclaims, and it disposes.</p> <p>As Antimony Pentachloride rapidly causes hydrolysis by water, and generates white smoke (hydrogen chloride gas), it adds to bags of water extremely little by little and it makes it to solution.</p> <p>When antimony pentasulfide is precipitated, sodium sulfide of the proper quantity is added. It is noted that precipitation dissolves again when three times or more the amount of the theory are added.</p>
13.2 Disposal of Packaging:	Because the antimony oxide and the hydrogen chloride gas are generated if a used barrel where Antimony Pentachloride adheres is incinerated, it doesn't incinerate in the incinerator without the wet scrubber.

* As for waste(or disposal), it is a thing to note the waste restrictions of each region, and to follow.

14. TRANSPORT INFORMATION	
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14.1 UN Classification:	8 (Corrosives)
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14.2 UN Dangerous Goods Number:	1730
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Follow all regulations in your region.

15. REGULATORY INFORMATION	
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Please refer to any other national measures that may be relevant.

16. OTHER INFORMATION	
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16.1 Uses:	Industrial material (for catalyst etc)
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16.2 Treatment of stated contents:	The contents of this information sheet are based on the data, information available at the moments, and may be revised by additional data coming up in the future.
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This caution mentioned in this sheet are subject to usual treatment manner of this material, when use in unusual manner, the proper safety method is required.

16.3 Revision

No.00 Revision date: Aug.2006

New issue (Q0757-00)

17. REFERENCES	
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Treatise of a Biochemistry 4 (MARUZEN CO., LTD.)
Poisonous and Deleterious Substances standard and relation notification collection (Yakumukouhousya)
Guidance of Poisonous and Deleterious Substances handling (Jiji Press Ltd.)
12695 Chemical commodities (THE CHEMICAL DAILY CO., LTD.)
MSDS Mitsubishi Materials Corporation (1. April. 1993)
MSDS Canadian Centre for Occupational Health and Safety (9. Mar. 1992)
Chemical Safety Data book (Ohmsya, LTD.)
New Chemical Index Ver.1995 (THE CHEMICAL DAILY CO., LTD.)
Hazardous Material Data book (MARUZEN CO., LTD.)
Shipping and Stockpiling Regulation for dangerous material (Kaibundo)
MSDS NIHON KAGAKU SANGYO CO., LTD. (1. April. 2005)