

Safety Data Sheet (SDS)

Antimony Pentasulfide

(For coloring of copper alloys)

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Substance name:	Antimony Pentasulfide
Product name:	AS-S1
Company name:	NIHON SEIKO CO.,LTD.
Address	3-2 SHIMOMIYABI-CHO SHINJUKU-KU TOKYO 162-0822 JAPAN
Charge section	SALES DEPT.
Phone number	+81-3-3235-0031
Fax number	+81-3-3235-0034
E-mail address	mail@nihonseiko.co.jp
Emergency telephone number	NAKASE REFINERY QUALITY ASSURANCE SECTION +81-79-667-2121
Recommended use and restriction on use:	Industrial materials: Surface preparation agent of Metal, etc.

2. HAZARDS IDENTIFICATION

GHS classification :	Classification not possible or Not classified
GHS label:	
Hazard pictogram	Not applicable.
Signal word	Not applicable.
Hazard statements	Not applicable.
Precautionary statements	【Prevention】 Not applicable. 【Response】 Not applicable. 【Storage】 Not applicable. 【Disposal】 Not applicable.
Other hazard not applicable to GHS classification hazard:	No information.
The summary of important signs and assumed emergency:	No information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance/Mixture:	Substance
General product description:	Antimony Pentasulfide
Other name:	-
Chemical property (Chemical formula etc):	Sb_2S_x X=3.0-5.0
CAS number:	1315-04-4
Component and its content:	Sb:65-78%, S:17-30%
EINECS number:	215-255-5
Impurity and stabilizing additive that contribute to GHS Classification:	As:0.06%, Pb:0.10%

<p>4.FIRST AID MEASURES</p> <p>Following inhalation:</p> <p>Following skin contact:</p> <p>Following eye contact:</p> <p>After ingestion:</p> <p>Most important symptoms and effects ,both acute and delayed:</p> <p>Protection of person who do first aid:</p> <p>Special precaution statement for doctor:</p>	<p>Move affected person to fresh air. If you feel sick, seek medical attention.</p> <p>Wash with water and remove clothes if necessary. Flush eyes thoroughly with water, also under eyelids. Rinse mouth with water. If you feel sick, seek medical attention.</p> <p>No information.</p> <p>No information.</p> <p>No information.</p>
<p>5.Fire-fighting measure</p> <p>Extinguishing media:</p> <p>Unsuitable extinguishing media:</p> <p>Special hazards arising from the Substance or mixture:</p> <p>Specific fire-fighting:</p> <p>Protection for fire-fighter:</p>	<p>Use fire-fighting measures that suit the environment. Water, Fire-extinguishing powder, Carbon dioxide, etc.</p> <p>No information.</p> <p>May generate sulfur and antimony oxide smog if heating or contact steam of acid or acid.</p> <p>Move the container from fire area, if it can be done without risk.</p> <p>Wear suitable protective equipment in fire-fighting.</p>
<p>6.Accidental release measures</p> <p>Personal precautions, protective equipment and emergency procedures:</p> <p>Environmental precautions:</p> <p>Methods and material for containment and cleaning up:</p> <p>Prevention of second disaster:</p>	<p>Avoid formation of dust. Ensure adequate ventilation. Keep unprotected persons away. It is advised to avoid contact with skin, eyes, and clothing – wear suitable protective equipment. Avoid inhalation of dust.</p> <p>It is advised that in the event of an accidental release the product should be prevented from reaching the sewage system or any water course and penetrating the soil. Dispose of spilled material in accordance with the relevant regulations.</p> <p>In any case avoid dust formation. Sweep all spilled material or use an appropriate industrial vacuum cleaner. Collect spilled material in suitable containers or closed plastic bags for recovery or disposal.</p> <p>For more information on exposure controls/personal protection or disposal considerations, check section 8 and 13 of this safety data sheet.</p>
<p>7.Handling and storage</p> <p>Handling:</p> <p>Technological countermeasure</p>	<p>Provide a local dust collection system in the places where dust can be generated. Provide dust protective mask in the handling position.</p>

<p>Safety precaution</p> <p>Avoid contact</p> <p>Hygiene measure</p> <p>Storage:</p> <p>Safety storage condition</p> <p>Safety packaging material</p>	<p>Do not handle until all safety precautions have been read and understood.</p> <p>Work by wearing suitable protective equipment.</p> <p>Check section 10.</p> <p>Avoid inhalation or ingestion.</p> <p>General occupational hygiene measures are required to ensure a safe handling of the substance.</p> <p>These measures involve good personal and housekeeping practices (i.e. regular cleaning with suitable cleaning devices).</p> <p>No eating, drinking and smoking at the work place.</p> <p>Wash hands after use.</p> <p>Remove contaminated clothing and protective equipment before entering eating areas.</p> <p>Shower and change clothes at end of work shift.</p> <p>Do not wear contaminated clothing at home. Do not blow dust off with compressed air.</p> <p>Store in cool dark place with sealed state.</p> <p>Establish whether the container conforms test standard on a voluntary basis.</p>
<p>8.EXPOSURE CONTROLS / PERSONAL PROTECTION</p>	
<p>Exposure control limits</p> <p>Effect of over exposure: ACGIH(2024)</p> <p>Engineering controls:</p> <p>Personal protective equipment: Respiratory protection Hand protection Eye protection Skin and body protection</p> <p>Special precaution statement</p>	<p>0.5mg/m³ TLV-TWA (Antimony and compounds, as Sb)</p> <p>Prevent formation of dust where possible. Ensure appropriate ventilation/exhaustion at machinery and places where dust can be generated. Any deposit of dust which cannot be avoided must be regularly removed using preferably appropriate industrial vacuum cleaners or central vacuum systems.</p> <p>Waste air is to be released into the atmosphere only when it has passed through suitable dust separators.</p> <p>Waste water generated during the production process or cleaning operations should be collected and should preferably be treated in an on-site waste water treatment plant which ensures efficient removal of antimony.</p> <p>Dust protective mask Protective gloves Protective glasses Protective high boots and cloth</p> <p>Avoid environmental discharge.</p>
<p>9.PHYSICAL AND CHEMICAL PROPERTIES</p>	
<p>Appearance: Physical state Figure Color</p> <p>Odor:</p> <p>Melting point:</p> <p>Initial boiling point and boiling range:</p> <p>Flammability:</p>	<p>Solid Powder Bister</p> <p>Odorless</p> <p>No information.</p> <p>No information.</p> <p>There is the behavior of flammability by heating or powerful chemical reaction with the oxidizing agent.</p>

Upper/lower flammability or explosive limits: Flash point: Auto-ignition temperature: Decomposition temperature: pH: kinematic viscosity: Solubility(ies): Partition coefficient n-octanol/water: Vapor pressure: Relative density: Relative vapour density: Particle characteristics: Other:	No information. No information. No information. 75°C No information. No information. No information. No information. No information. 4.12 No information. No information. No information.
10.STABILITY AND REACTIVITY Reactivity: Chemical stability: Possibility of hazardous reactions: Conditions to avoid: Incompatible materials: Hazardous decomposition products: Other:	No information. Under normal conditions of use and storage, the product is stable. When heated in the air, it burns with a blue flame and antimony oxide and sulfur dioxide is generated. It decomposes and generates toxic hydrogen sulfide if it meets strong acids. Antimonic acid is generated when dissolved in alkali. Heating Halogen, Strong acids/bases Hydrogen sulfide, Sulfur dioxide, Antimony oxide No information.
11.TOXICOLOGICAL INFORMATION Acute Toxicity (Oral): Acute Toxicity (Dermal): Acute Toxicity (Inhalation: dust/mist): Acute Toxicity (Inhalation: fume/vapors): Skin corrosion/irritation: Serious eye danger/irritation: Respiratory or skin sensitization: Germ cell mutagenicity: Carcinogenicity: Japan Society for Occupational Health ACGIH EPA NTP EU IARC Reproductive toxicity: STOT single exposure: STOT repeated exposure: Aspiration hazard: Other:	LD50 Oral, Rat :>10 mg/kg LD50 Interperitoneal, Rat :1500mg/kg LD50 Interperitoneal, Mouse :458mg/kg Classification not possible, because of a lack of information. Classification not possible, because of a lack of information. Classification not possible, because of a lack of information. Out of category to powder. Classification not possible, because of a lack of information. Classification not possible, because of a lack of information. Classification not possible, because of a lack of information. Classification not possible, because of a lack of information. Classification not possible, because of a lack of information. Not classified as carcinogen. Not classified as carcinogen. Not classified as carcinogen. Not classified as carcinogen. Not classified as carcinogen. Group 3 Classification not possible, because of a lack of information. Classification not possible, because of a lack of information. Classification not possible, because of a lack of information. Classification not possible, because of a lack of information. No information.

12.ECOLOGICAL INFORMATION	
Ecotoxicity:	Classification not possible, because of a lack of information.
Persistence and degradability:	No information.
Bioaccumulative potential:	No information.
Mobility in soil:	No information.
Hazardous to the ozone layer:	No information.
Other:	No information.
13.DISPOSAL CONSIDERATIONS	
Waste from residues:	Dispose of contents in accordance with local/regional/national /international regulations(to be specified).
Contaminated container/packing:	Dispose of contents in accordance with local/regional/national /international regulations(to be specified).
14.TRANSPOT INFORMATION	
International regulation:	
UN code	Not applicable.*
Proper shipping name	Not applicable.
UN Class	Not applicable.
Packing group	Not applicable.
Marine pollutant	Not applicable.
*UN regulation : The special provision SP45 is applicable to the UN number 1549 (Hazard class6.1 and packaging groupIII). It means that antimony sulfides and oxides, which contain not more than 0.5% of arsenic calculated on the total weight, are not subject to these regulations.	
15.REGULATORY INFORMATION	
Worldwide chemical inventories:	
ENCS(Japan)	1-1154
TSCA(USA)	Listed
ECL(Korea)	KE-09840
DSL(Canada)	Not listed. NDSL is listed.
PICCS(Philippines)	Listed
AICS(Australia)	Listed
IECSC(China)	Listed
Other regulatory information:	Follow regulation and law of each country or region.
16. OTHER INFORMATION	
Treatment of stated contents:	The contents of this information sheet are based on the data, information available at moments, and may be revised by additional data coming up in future. The precautions mentioned in this sheet are intended for normal use of this material, when use in unusual manner, the proper safety method is required. Read this SDS before use the ingredients. Keep this SDS 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.
References:	1.GHS taiou guideline Edit: Japan Chemical Industry Association Issuance: Japanese Standards Association 2.Antimony Trioxide SDS form of International Antimony Association (i2a) 3. 【Kaiteidai3ban】 Kinkyujioukyusochishishin Issuance: Japanese Standards Association 4.National Institute of Technology and Evaluation (NITE)_ Chemical Risk Information Platform (CHRIP)_Antimony

	<p>5.OECD-SIAM(October 14-16. 2012)SIDS Initial Assessment Profile</p> <p>6.National Institute of Technology and Evaluation (NITE)_ Chemical Risk Information Platform (CHRIP)_ Antimony Pentasulfide</p> <p>7.TRANSPORT OF DANGEROUS GOODS Model Regulations 17th vol I en United Nation</p> <p>8. Kanagawa Environmental Research Center Antimony Pentasulfide</p>
--	---