1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	**Antimony**
Chemical Formula	Sb
Molecular Weight	121.75 amu
CAS No.	7440-36-0
UN No.	UN2871
Recommended Use	Powder
Synonyms	Antimony Black, Antimony Regulus, Antymon (Polish), C.I. 77050, Stibium
Supplier Address*	ISOFLEX USA P.O. Box 29475 San Francisco, CA 94129 United States
Telephone	+1 415-440-4433
Fax	+1 415-563-4433
Emergency Phone Number (both supplier and manufacturer)	Infotrac/ +1 800-535-5053 *May include subsidiaries or affiliate companies/divisions
Email	iusa@isoflex.com
Website	www.isoflex.com
Preparation Information	ISOFLEX USA Product Safety +1 415-440-4433

2. HAZARDS IDENTIFICATION

Emergency Overview

Irritant to eyes, respiratory system and skin

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

Dangerous for the environment

Possible sensitizer. Target organ(s): Heart, respiratory system.

NFPA Ratings: (0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe)

Health Hazard = 2* **Flammability = 0** **Reactivity = 1**

*additional chronic hazards present

HMIS Ratings: (0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe)

Health Hazard = 2* **Flammability = 0** **Physical Hazard = 1**

HEALTH HAZARD	2
FLAMMABILITY	0
PHYSICAL HAZARD	1

*additional chronic hazards present

RTECS No.: CC4025000

Potential Health Effects

Principle Routes of Exposure	Inhalation Eye Contact Skin Contact Skin Absorption Ingestion Sensitization

Acute Toxicity

Inhalation	Material may be irritating to mucous membranes and upper respiratory tract; may be harmful if inhaled
Eyes	May cause eye irritation
Skin Contact	May cause skin irritation
Skin Absorption	May be harmful if absorbed through the skin
Ingestion	May be harmful if swallowed
Sensitization	Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals
Aggravated Medical Conditions	Chronic effects due to antimony are alterations of the ECG, especially T-wave abnormalities, myocardial changes, pneumoconiosis, but also pneumonitis, tracheitis, laryngitis, bronchitis, pustular skin eruptions called antimony spots, and contact allergy to the metal.
Target Organ(s) or System(s)	Respiratory system, heart
Signs and Symptoms of Exposure	Nausea, vomiting, diarrhea, headache, dizziness

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3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name:	Antimony
CAS No.:	7440-36-0
Volume %:	>98%
Chemical Formula:	Sb
Molecular Weight:	121.75 amu

4. FIRST AID MEASURES

Eye Contact	In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.
Skin Contact	In case of contact, immediately wash skin with soap and copious amounts of water.
Ingestion	If swallowed, wash out mouth with water provided person is conscious. Call a physician.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

5. FIREFIGHTING MEASURES

Flammable Hazards	Yes
Suitable Extinguishing Media	Water spray, carbon dioxide, dry chemical powder or appropriate foam

Explosion Data

Specific Hazards Arising from the Chemical	Emits toxic fumes under fire conditions
Flash Point	No data available
Autoignition Temperature	No data available
Flammability	No data available
Protective Equipment and Precautions for Firefighters	Wear self-contained breathing apparatus pressure and protective clothing to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Wear respirator, chemical safety goggles, rubber boots and heavy rubber gloves.
Methods for Cleaning Up	Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

7. HANDLING AND STORAGE

Handling	Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.
Storage	Keep container closed. Keep away from heat, sparks, and open flame.
Special Requirements	Air sensitive, moisture-sensitive

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits, RTECS

Country	Source	Type	Value
USA	ACGIH	TWA	0.5 mg/m³
USA	MSHA Standard-air	TWA	0.5 mg/m³
USA	OSHA. PEL 8H	TWA	0.5 mg (Sb)/m³
New Zealand	OEL		

Remarks: check ACGIH TLV

USA	NIOSH	TWA	0.5 mg (Sb)/m³

Exposure Limits

Country	Source	Type	Value
Poland		NDS	0.5 mg/m³
Poland		NDSCh	1.5 mg/m³
Poland		NDSP	-

Engineering Measures — Safety shower and eye bath; mechanical exhaust required

Personal Protective Equipment

Eye/Face Protection — Chemical safety goggles

Skin and Body Protection — Compatible chemical-resistant gloves

Respiratory Protection — Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate, use a dust mask type N95 (US) or type P1 (EN 143) respirator.

Hygiene Measures — Wash thoroughly after handling

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	Solid

Safety Data

pH	No data available
Boiling Point	2888 ºF / 1587 ºC
Melting Point/Range	1167 ºF / 630.74 ºC
Freezing Point	No data available
Flash Point	No data available
Flammability	No data available
Autoignition Temperature	No data available
Explosion Limits	No data available
Flammability	No data available
Vapor Pressure	No data available
Saturated Vapor Concentration	No data available
Bulk Density	No data available
Vapor density (Air=1)	No data available
SG/Density	6.69 g/cm^3
Volatile %	No data available
Evaporation Rate	No data available
Water Content	No data available
Solubility	No data available
Surface Tension	No data available
Decomposition Temperature	No data available
Odor Threshold	No data available
VOC Content	No data available
Solvent Content	No data available
Viscosity	No data available
Partition Coefficient	No data available
Refractive Index	No data available
Optical Rotation	No data available

10. STABILITY AND REACTIVITY

Stability	Stable
Materials to Avoid	Oxidizing agents, acids. Reaction with acids produces highly toxic fumes of stibine (antimony hydride).
Conditions of Instability	May discolor on exposure to air and moisture
Hazardous Polymerization	Will not occur
Hazardous Decomposition Products	Antimony/antimony oxides

11. TOXICOLOGICAL INFORMATION

Toxicity Data

Oral	*Intraperitoneal*	*Intraperitoneal*	*Intraperitoneal*
Rat	*Rat*	*Mouse*	*Guinea pig*
7000 mg/kg	*100 mg/kg*	*90 mg/kg*	*150 mg/kg*
LD50	*LD50*	*LD50*	*LD50*

Chronic Exposure – Carcinogen

Species: Rat
Route of Application: Inhalation
Dose: 50 mg/m^3
Exposure Time: 7H/52W
Frequency: I
Result: Lungs, thorax or respiration: Tumors
Tumorigenic: Carcinogenic by RTECS criteria

Irritation	Irritant to eyes, respiratory system and skin
Sensitization	Possible sensitizer
Target Organ Effects	Respiratory system, heart

12. ECOLOGICAL INFORMATION

Acute Toxicity Tests

Test Type: LC50 Fish
Species: *Cyprinodon variegatus* (Sheepshead minnow)
Time: 96 h
Value: 6.2-8.3 mg/L

EU Additional Classification

Symbol of Danger:	N
Indication of Danger:	Dangerous for the environment.

R: 51/53

Risk Statements: Toxic to aquatic organisms; may cause long-term adverse effects in the aquatic environment.

S: 60

Safety Statements: This material and its container must be disposed of as hazardous waste.

Dangerous for the environment.

Toxic to aquatic organisms; may cause long-term adverse effects in the aquatic environment. Avoid release to the environment. Refer to special instructions/safety data sheets.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods — Contact a licensed professional waste disposal service to dispose of this material. Material in the elemental state should be recovered for reuse or recycling. Observe all federal, state and local environmental regulations.

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name	Antimony powder
Hazard Class	6.1
UN No.	UN2871
Packing Group	III
Hazard Label	Toxic Substance
PIH	Not PIH

IATA

Proper Shipping Name	Antimony powder
Hazard Class	6.1
IATA UN No.	UN2871
Packing Group	III

15. REGULATORY INFORMATION

United States Regulatory Information

SARA Listed:	Yes
De Minimis:	1%
Notes:	This product is subject to SARA section 313 reporting requirements.
TSCA Inventory Item:	Yes

U.S. State Regulations

California Proposition 65:	No

Canada Regulatory Information

WHMIS Classification:	This product has been classified in accordance with the hazard criteria of the CPR, and the SDS contains all the information required by the CPR.
DSL:	Yes
NDSL:	No

16. OTHER INFORMATION

Prepared By	ISOFLEX USA PO Box 29475 San Francisco CA 94129 United States
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Revision Number	3
Revision Note	Required review and update

ISOFLEX USA's Commonly Used Abbreviations and Acronyms*

ACGIH	American Conference of Governmental Industrial Hygienists
ADR	European Agreement Concerning the International Carriage of Dangerous Goods by Road
ALARA	As Low As Is Reasonably Achievable
AMU	Atomic Mass Unit
ANSI	American National Standards Institute
BLS	Basic Life Support
CAM	Continuous Air Monitor
CAS	Chemical Abstracts Service (division of the American Chemical Society)
CEN	European Committee for Standardization
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CLP	Classification, Labelling and Packaging (European Union)
CPR	Controlled Products Regulations (Canada)
CWA	Clean Water Act (USA)
DAC	Derived Air Concentration (USA)
DOE	United States Department of Energy (USA)
DOT	United States Department of Transportation (USA)
DSL	Domestic Substances List (Canada)
EC50	Half Maximal Effective Concentration
EINECS	European Inventory of Existing Commercial Chemical Substances
EHS	Environmentally Hazardous Substance
ELINCS	European List of Notified Chemical Substances
EMS	Emergency Response Procedures for Ships Carrying Dangerous Goods
EPA	Environmental Protection Agency (USA)
EPCRA	Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986
GHS	Globally Harmonized System
HMIS	Hazardous Materials Identification System (USA)
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	Intermediate Bulk Containers
ICAO	International Civil Aviation Organization
IDLH	Immediately Dangerous to Life or Health
IMDG	International Maritime Code for Dangerous Goods
LC50	Lethal concentration, 50 percent
LD50	Lethal dose, 50 percent
LDLO	Lethal Dose Low
LOEC	Lowest-Observed-Effective Concentration
MARPOL	International Convention for the Prevention of Pollution from Ships
MSHA	Mine Safety and Health Administration (USA)
NCRP	National Council on Radiation Protection & Measurements (USA)
NDSL	Non-Domestic Substances List (Canada)
NFPA	National Fire Protection Association (USA)
NIOSH	National Institute for Occupational Safety and Health (USA)
NOEC	No Observed Effect Concentration
N.O.S.	Not Otherwise Specified
NRC	Nuclear Regulatory Commission (USA)
NTP	National Toxicology Program (USA)
OSHA	Occupational Safety and Health Administration (USA)
PBT	Persistent Bioaccumulative and Toxic Chemical
PEL	Permissible Exposure Limit
PIH	Poisonous by Inhalation Hazard
RCRA	Resource Conservation and Recovery Act (USA)
RCT	Radiation Control Technician
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals (Europe)
RID	Regulations Concerning the International Transport of Dangerous Goods by Rail
RTECS	Registry of Toxic Effects of Chemical Substances
SARA	Superfund Amendments and Reauthorization Act (USA)
TDG	Transportation of Dangerous Goods (Canada)

TIH	Toxic by Inhalation Hazard
TLV	Threshold Limit Value
TPQ	Threshold Planning Quantity
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average
UN	United Nations (Number)
VOC	Volatile Organic Compound
vPvB	Very Persistent Very Bioaccumulative Chemical
WGK	Wassergefährdungsklassen (Germany: Water Hazard Classes)
WHMIS	Workplace Hazardous Materials Information System

*One or more of the above-listed items may not appear in this document.

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