EU SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 and Regulation (EU) No 453/2010 (REACH)

Diantimony trioxide

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: Diantimony trioxide
REACH registration No.: 01-2119475613-35-0025

1.2 Relevant identified uses of the substance or mixture and uses advised against

General use: Chemical basic material.
Reserved for industrial and professional use.

Identified uses: Industrial use:
Use as processing aid in manufacture of chemicals, resins, rubbers and plastics, adhesive, flame retardant protective clothing, ceramic, glass, paints and varnishes, enamel and semiconductor.

Professional personnel:
Raw material for chemical synthesis.
Raw material for producing of an article.

1.3 Details of the supplier of the safety data sheet

Company name: Dongguan JieFu Flame Retardant Materials Co. Ltd
Street/POB-No.: Jiefu Industrial Park, Shuiping District Zone, Dalang Town, Dongguan City Guangdong Province
Postal Code, city: 518040
Telephone: +86 755 83474910
Telefax: +86 755 83474980
Dept. responsible for information:
Administrative Department,
Telephone: +86 755 83474910 , E-mail: franky@jiefu.com

1.4 Emergency telephone number

Dongguan, China, Telephone: +86 (0)769-83120165

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to EC regulation 1272/2008 (CLP)

Carc. 2; H351 Suspected of causing cancer.

Classification according to directive 67/548/EEC

Carc. Cat. 3; R40 Limited evidence of a carcinogenic effect.

2.2 Label elements

Labelling (CLP)

Signal word: **Warning**

Hazard statements: H351 Suspected of causing cancer.

Safety precautions:	P202	Do not handle until all safety precautions have been read and understood.
	P281	Use personal protective equipment as required.
	P308+P313	IF exposed or concerned: Get medical advice/attention.
	P501	Dispose of contents/container to hazardous or special waste collection point.

Labelling (67/548/EEC or 1999/45/EC)

Xn

harmful

R phrase(s):	R 40	Limited evidence of a carcinogenic effect.
S phrase(s):	S (2)	Keep out of the reach of children.
	S 22	Do not breathe dust.
	S 36/37	Wear suitable protective clothing and gloves.

Special labelling

Text for labelling: For professional use only.

2.3 Other hazards

No risks worthy of mention.

SECTION 3: Composition / information on ingredients

3.1 Substances

Chemical characterization: O3 Sb2 = Sb2 O3
Diantimony trioxide

CAS-Number: 1309-64-4
EC-number: 215-175-0
EU-number: 051-005-00-X
RTECS-Number: CC5650000

Hazardous ingredients:

Ingredient	Designation	Content	Classification
REACH 01-2119475613-35-xxxx EINECS 215-175-0 CAS 1309-64-4	Diantimony trioxide	99.5-99.95 %	EU: Carc. Cat. 3; R40. CLP: Carc. 2; H351.
EINECS 215-267-0 CAS 1317-36-8	Lead monoxide (SVHC)	< 0,1 %	EU: CLP: Acute Tox. 4; H302. Acute Tox. 4; H332. Repr. 1A; H360Df. STOT RE 2; H373. Aquatic Acute 1; H400. Aquatic Chronic 1; H410.

Additional information: This mixture contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH: Lead monoxide (CMR)

SECTION 4: First aid measures

4.1 Description of first aid measures

After inhalation: Provide fresh air. Seek medical attention.

In case of skin contact: Wash with plenty of soap and water. Consult physician.

After eye contact: Immediately flush eyes with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

After swallowing: Rinse mouth immediately and drink plenty of water. Consult physician.

4.2 Most important symptoms and effects, both acute and delayed

Cough, fever, headache, nausea, circulatory collapse, apnea.
Following intake of large amounts: damage of kidneys

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:

Co-ordinate fire-fighting measures to the fire surroundings.

5.2 Special hazards arising from the substance or mixture

Not combustible.
Fires in the immediate vicinity may cause the development of dangerous vapours.

5.3 Advice for firefighters

Special protective equipment for firefighters:

Wear self-contained breathing apparatus. To avoid contact with skin, keep safety distance and wear suitable protective clothing.

Additional information: Hazchem-Code: -

Do not allow fire water to penetrate into surface or ground water.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Do not handle until all safety precautions have been read and understood.
Avoid generation of dust. Do not breathe dust. Avoid contact with the substance. Provide adequate ventilation. Wear personal protection equipment.

6.2 Environmental precautions

Do not allow to penetrate into soil, waterbodies or drains.

6.3 Methods and material for containment and cleaning up

Take up mechanically, placing in appropriate containers for disposal. Final cleaning.

6.4 Reference to other sections

Refer additionally to chapter 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advices on safe handling: Do not handle until all safety precautions have been read and understood.
Avoid contact with skin and eyes.
Wear personal protection equipment.
Avoid generation of dust. Do not breathe dust.
In case of dust: Provide adequate ventilation, and local exhaust as needed.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storerooms and containers:
Store container tightly closed in a dry and cool place.

Storage class: 13 = Non-combustible solids

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values:

CAS No.	Designation	Type	Limit value
1317-36-8	Lead monoxide (SVHC)	Europe: BOELV: TWA Ireland: 8 hours	0,15 mg/m³ (inhalable fraction) 0,15 mg/m³

DNEL/DMEL: DNEL Long-term systemic, workers, dermal: 281 mg/kg bw/d.
DNEL Long-term local, workers, inhalative:0,5 mg/m³
DNEL Long-term systemic, consumers, oral: 168,6 mg/kg bw/d.
DNEL Long-term systemic, consumers, dermal:168,6 mg/kg bw/d.
DNEL Long-term local, consumers, inhalative: 0,1 mg/m³

PNEC: PNEC water (freshwater): 0,113 mg/L.
PNEC water (marine water): 0,0113 mg/L.
PNEC sediment (freshwater): 11,2 mg/kg dwt.
PNEC sediment (marine water): 2,24 mg/kg dwt.
PNEC soil: 37 mg/kg dwt.
PNEC sewage treatment plant: 2,55 mg/L.

8.2 Exposure controls

In the case of the formation of dust: Withdraw by suction.

Occupational exposure controls

Respiratory protection: Respiratory protection must be worn whenever the WEL levels have been exceeded.
Particulates filter P2 according to EN 143.

Hand protection: Protective gloves according to EN 374.
Glove material: Nitrile rubber - Layer thickness: 0,11 mm.
Breakthrough time: >480 min.
Observe glove manufacturer's instructions concerning penetrability and breakthrough time.

Eye protection: Tightly sealed goggles according to EN 166.

Body protection: Wear suitable protective clothing.

General protection and hygiene measures:
Do not handle until all safety precautions have been read and understood.
Avoid contact with skin and eyes. Change contaminated clothing. After work, wash hands and face.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance: Physical state: solid, crystaline powder
Colour: white

Odour: odourless

Odour threshold: no data available

pH value:	no data available
Melting point/melting range:	656 °C (1013 hPa)
Boiling temperature/boiling range:	1425 °C (1013 hPa)
Flash point/flash point range:	not combustible
Vapourisation rate:	no data available
Flammability:	no data available
Explosive properties:	no data available
Explosion limits:	no data available
Vapour pressure:	at 574 °C: 1,3 hPa at 660 °C: 13,3 hPa
Vapour density:	no data available
Density:	at 20 °C: 5,897 g/cm³
Solubility:	soluble in hydrochloric acid, Tartaric acid, alcali hydroxide
Water solubility:	at 20 °C: 2,7 mg/L
Partition coefficient n-octanol/water:	no data available
Autoflammability:	no data available
Thermal decomposition:	no data available
Viscosity, dynamic:	no data available
Explosive properties:	no data available
Oxidizing characteristics:	no data available

9.2 Other information

Additional information: Molecular weight: 291,52 g/mol

SECTION 10: Stability and reactivity

10.1 Reactivity

Reacts with carbon, Potassium cyanide, and carbon monoxide and carbon dioxide.
Formation of Antimony (reduction).

10.2 Chemical stability

Product is stable under normal storage conditions.

10.3 Possibility of hazardous reactions

In case of warming: Danger of explosion with perchloric acid.
Violent reaction with Bromine triflouride.

10.4 Conditions to avoid

Heating (Decomposition).

10.5 Incompatible materials

Perchloric acid, Bromine triflouride.

10.6 Hazardous decomposition products

Fire/temperatures higher than 500 °C can produce: Antimony tetroxide (Sb2 O4).

Thermal decomposition: no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity:
LD50 Rat, oral: > 20.000 mg/kg
LD50 Rabbit, dermal: > 8.300 mg/kg
LD50 Rat, inhalative: > 5.200 mg/m³

Toxicological effects: Acute toxicity (oral): Based on available data, the classification criteria are not met. Acute toxicity (dermal): Based on available data, the classification criteria are not met.

Acute toxicity (inhalative): Based on available data, the classification criteria are not met.
NOAEC: 0,51 mg/m³ (target organ: lung)

Skin corrosion/irritation: Based on available data, the classification criteria are not met.
Albino rabbit: Not an irritant

Eye damage/irritation: Based on available data, the classification criteria are not met.
Rabbit: Not an irritant

Sensitisation to the respiratory tract: Lack of data.

Skin sensitisation: Based on available data, the classification criteria are not met.
Guinea pig: not sensitising

Germ cell mutagenicity/Genotoxicity: Based on available data, the classification criteria are not met.
Genotoxicity: negative

Carcinogenicity: Carc. 2; H351 = Suspected of causing cancer.
NOAEC: 0,51 mg/m³ (target organ: lung)

Reproductive toxicity: Based on available data, the classification criteria are not met.
Developmental toxicity:
NOAEC Rat, inhalative: 6,3 mg/m³

Effects on or via lactation: Lack of data.

Specific target organ toxicity (single exposure): Lack of data.

Specific target organ toxicity (repeated exposure): Based on available data, the classification criteria are not met.
Subchronic toxicity:
NOAEL Rat, oral: 1686 mg/kg bw/d
NOAEC Rat, inhalative: 0,51 mg/m³

Aspiration hazard: Lack of data.

Symptoms

Cough, fever, headache, nausea, circulatory collapse, apnea.
Following intake of large amounts: damage of kidneys

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: Even if strongly diluted, toxic water compounds develop.

Algae toxicity:
EC50 Pseudokirchneriella subcapitata (green algae): >2,4 mg/L/3 h (freshwater, statistical method, OECD 201)

CAS No. 10025-91-9 (SbCl3):
Acute Daphnia toxicity LC50 Hydra oligactis: > 1,95 mg/L/96 h. (freshwater, statistical method)
Chronic daphnia toxicity: NOEC Daphnia magna (Big water flea): 3,13 mg/L/21 d (freshwater, Semi-static test) (OECD 211)

Acute fish toxicity
LC50 Oncorhynchus mykiss: >25,7 mg/L/96 h (freshwater, statistical method)
Chronic (long-term) fish toxicity:
LC10 Oncorhynchus mykiss: 157 µg/L/28 d (freshwater)

CAS No. 10025-91-9 (SbCl3):
Sediment toxicity: NOEC Chironomus riparius: >= 445 mg Sb/kg/14 d (freshwater, Semi-static test) (OECD 218)

Toxicity to soil macroorganisms:
NOEC Folsomia candida: 9,7 mg Sb/L/28 d

Terrestrial toxicity
EC10 Hordeum vulgare: 1931 mg/kg soil/5 d

Toxicity to microorganisms (soil):
NOEC: 2930 mg Sb/kg dw

CAS No. 10025-91-9 (SbCl3):
Toxicity (aquatic micro-organism): NOEC activated sludge: 2,55 mg/L/4h

Water Hazard Class: 2 = hazardous to water (WGK catalog number 979)
Further details: Bioconcentration factor (BCF): >5000 L/kg

12.2. Persistence and degradability

Further details: Methods for the determination of biodegradability are not applicable to inorganic substances.
Substance is heavier than water and sinks.
Solubility in water: practically insoluble

12.3 Bioaccumulative potential

Partition coefficient n-octanol/water:
no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

12.6 Other adverse effects

General information: Do not allow to penetrate into soil, waterbodies or drains.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Waste key number: 16 03 03* = Inorganic wastes containing dangerous substances.
* = Evidence for disposal must be provided.

Recommendation: Dispose of as hazardous waste in compliance with local and national regulations.

Contaminated packaging

Recommendation: Dispose of waste according to applicable legislation.
Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

	US DOT	Canada TDG
Shipping Name:	Not regulated as a hazardous material	Not regulated
Hazard Class:		
UN Number:		
Packing Group:		

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations - Great Britain

Hazchem-Code: -

National regulations - EC member states

Volatile organic compounds (VOC):
0 % by weight

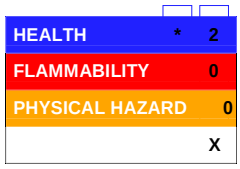
National regulations - USA

TSCA Inventory: listed
TSCA HPVC: not listed
Carcinogen Status:
IARC Rating: Group 2B
OSHA Carcinogen: not listed
NTP Rating: not listed
Clean Water Act:
Hazardous Substances: RQ 1000 lbs.
Other Environmental Laws:
CERCLA: RQ 1000 lbs.

Hazard rating systems:

NFPA Hazard Rating:
Health: 2 (Moderate)
Fire: 0 (Minimal)
Reactivity: 0 (Minimal)

HMIS Version III Rating:
Health: 2 (Moderate) - Chronic effects
Flammability: 0 (Minimal)
Physical Hazard: 0 (Minimal)
Personal Protection: X = Consult your supervisor



National regulations - Canada

DSL: listed

15.2 Chemical Safety Assessment

For this substance a chemical safety assessment has been carried out.

SECTION 16: Other information

Further information

Wording of the H-phrases under paragraph 2 and 3:

H302 = Harmful if swallowed.
H332 = Harmful if inhaled.
H351 = Suspected of causing cancer.
H360Df = May damage the unborn child. Suspected of damaging fertility.
H373 = May cause damage to organs through prolonged or repeated exposure.
H400 = Very toxic to aquatic life.
H410 = Very toxic to aquatic life with long lasting effects.

Wording of the R-phrases under paragraph 2 and 3:

R 40 = Limited evidence of a carcinogenic effect.

Reason of change: Changes in section 2: classification, Labeling
Changes in section 8: DNEL and PNEC values
Changes in section 11: Toxicological information
Changes in section 12: Ecological information
General revision

Date of first version: 01.01.2017

Department issuing data sheet

Contact person: see section 1: Dept. responsible for information

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

The information in this data sheet has been established to our best knowledge and was up-to-date at time of revision. It does not represent a guarantee for the properties of the product described in terms of the legal warranty regulations.