

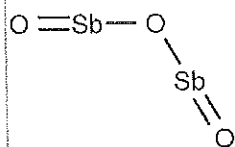
Diantimony trioxide

Substance identity

EC / List no.: 215-175-0

CAS no.: 1309-64-4

Mol. formula: O₃Sb₂



Hazard classification & labelling



Warning! According to the harmonised classification and labelling (CLP00) approved by the European Union, this substance is suspected of causing cancer.

Additionally, the classification provided by companies to ECHA in REACH registrations identifies that this substance may damage fertility or the unborn child, causes damage to organs through prolonged or repeated exposure and is harmful to aquatic life with long lasting effects.

At least one company has indicated that the substance classification is affected by impurities or additives.

Properties of concern

R

Regulatory activities

Substance included in the Community Rolling Action Plan (CoRAP).

About this substance

This substance is manufactured and/or imported in the European Economic Area in 10 000+ tonnes per year.

This substance is used by consumers, in articles, by professional workers (widespread uses), in formulation or re-packing, at industrial sites and in manufacturing.

Consumer Uses

ECHA has no public registered data indicating whether or in which chemical products the substance might be used. ECHA has no public registered data on the routes by which this substance is most likely to be released to the environment.

Article service life

ECHA has no public registered data on the routes by which this substance is most likely to be released to the environment. ECHA has no public registered data indicating whether or into which articles the substance might have been processed.

Widespread uses by professional workers

ECHA has no public registered data indicating whether or in which chemical products the substance might be used. ECHA has no public registered data on the types of manufacture using this substance. ECHA has no public registered data on the routes by which this substance is most likely to be released to the environment.

Formulation or re-packing

ECHA has no public registered data indicating whether or in which chemical products the substance might be used. ECHA has no public registered data on the routes by which this substance is most likely to be released to the environment.

Uses at industrial sites

ECHA has no public registered data indicating whether or in which chemical products the substance might be used. ECHA has no public registered data on the types of manufacture using this substance. ECHA has no public registered data on the routes by which this substance is most likely to be released to the environment.

Manufacture

ECHA has no public registered data on the routes by which this substance is most likely to be released to the environment.

The InfoCard summarises the non-confidential data on substances as held in the databases of the European Chemicals Agency (ECHA), including data provided by third parties. The InfoCard is automatically generated. Information requirements under different legislative frameworks may therefore not be up-to-date or complete. Substance manufacturers and importers are responsible for consulting official publications. This InfoCard is covered by the ECHA Legal Disclaimer.



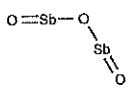
about INFOCARD - Last updated: 24/11/2017

The Brief Profile summarizes the non-confidential data on substances as it is held in the databases of the European Chemicals Agency (ECHA), including data provided by third parties. The Brief Profile is automatically generated; note that it does not currently distinguish between harmonised classification and minimum classification; information requirements under different legislative frameworks may therefore not be fully up to date or complete. For accuracy reasons, substance manufacturers and importers have the responsibility to consult official sources, e.g. the electronic edition of the Official Journal of the European Union. This Brief Profile is covered by the ECHA Legal Notice.

Diantimony trioxide

Brief Profile - Last updated: 23/01/2018

Substance Description

Substance identity	
	EC / List name: Diantimony trioxide IUPAC name: oxostibanyl stibinate Other names:
SMILES:	O=[Sb](O)[Sb]=O
InChI:	InChI=1S/3O,2Sb AuxInfo=1/0/N:3;4;5;1;2/rA:5SbSbO00/rB:s1s2;d1 ;hC:3.3538;-1.8321,0;5.6638;-3.1650;0;4.8938;-1.8321, 0;6.4330;-4.4995;0;1.8198;-1.8321,0;
Type of substance:	Mono constituent substance
Origin:	Inorganic
Registered compositions:	18
Of which contain:	9 impurities relevant for classification 0 additives relevant for classification
Substance Listed:	EINECS (European Inventory of Existing Commercial chemical Substances) List
EC / List no.:	215-175-0
CAS no.:	1309-64-4
Index number:	051-005-00-X
Molecular formula:	O3Sb2

Hazard classification & labelling



Warning! According to the harmonised classification and labelling (CLP00) approved by the European Union, this substance is suspected of causing cancer.

Additionally, the classification provided by companies to ECHA in REACH registrations identifies that this substance may damage fertility or the unborn child, causes damage to organs through prolonged or repeated exposure and is harmful to aquatic life with long lasting effects.

Breakdown of all 1664 C&L notifications submitted to ECHA

Carc. 2	H351	<input checked="" type="checkbox"/>
Aquatic Chronic 3	H412	<input type="checkbox"/>
Aquatic Chronic 2	H411	<input type="checkbox"/>
Acute Tox. 4	H332	<input type="checkbox"/>
STOT RE 1	H372	<input type="checkbox"/>
Repr. 1A	H360	<input type="checkbox"/>
Acute Tox. 4	H302	<input type="checkbox"/>
Eye Irrit. 2	H319	<input type="checkbox"/>
Skin Irrit. 2	H315	<input type="checkbox"/>
Carc. 2	H350	<input type="checkbox"/>
STOT SE 1	H370	<input type="checkbox"/>
STOT RE 2	H373	<input type="checkbox"/>

0% 10%20%30%40%50%60%70%80%90%100%

☒ Harmonised Classification

☐ REACH registration dossiers notifications
CLP notifications

☐ At least one notifier has indicated that an impurity or an additive present in the substance impacts the notified classification.

Properties of concern

R

Regulatory activities

Registration, Evaluation, Authorisation & Restriction of Chemicals (REACH)

Registration

Pre-registration: Substance pre-registered under REACH.

Registration: This substance has 32 active registrations under REACH, 1 Joint Submission(s) and 0 Individual Submission(s).

Evaluation

Dossier Evaluation:

Substance Evaluation: Substance included in the Community Rolling Action Plan (CoRAP).

Authorisation

Annex XIV

Annex XIV

Restriction

Annex XVII

Classification Labelling & Packaging (CLP)

Harmonised C&L:

A European Union Harmonised Classification & Labelling has been assigned to this substance.

Notification:

Classification & Labelling has been notified by industry to ECHA for this substance.

Biocidal Products Regulation (BPR)

Active Substance:

Biocidal Products:

Prior Informed Consent (PIC)

Annex I:

Annex V:

Precautionary Measures and safe use

Precautions for using this substance have been recommended by its registrants under REACH, as follows:

Prevention statements

When handling this substance: do not handle until all safety precautions have been read and understood; do not breathe the dust, fume, gas, mist, vapours or spray; use personal protective equipment as required; avoid release to the environment.

Response statements

In case of incident: If exposed or concerned: get medical advice/attention.

Storage statements

Store this substance locked up.

Disposal statements

The substance must be disposed in accordance with local/regional/national/international regulation.

Guidance on the safe use of the substance provided by manufacturers and Importers of this substance.

Registrants/suppliers

Active

- Amik Italia, VIA FANTOLI 5/7 20138 MILANO Italy Italy
- ANTRACO Chemie-Handelsges. mbH, Dueseldorfer Landstrasse 17 47249 Duisburg NRW Germany
- B-Lands Consulting (811522-9), World Trade Center, 5 Place Robert Schuman, BP 1516 38025 Grenoble France France
- B-Lands Consulting (811526-1), World Trade Center, 5 Place Robert Schuman, BP 1516 38025 Grenoble France France
- B-Lands Consulting (811550-6), World Trade Center, 5 Place Robert Schuman, BP 1516 38025 Grenoble France France
- B-Lands Consulting (811563-6), World Trade Center, 5 Place Robert Schuman, BP 1516 38025 Grenoble France France
- BASF Pigment GmbH, Carl-Bosch Str. 38 67056 Ludwigshafen am Rhein Rheinland-Pfalz Germany
- Campine nv, Nijverheidsstraat 2 2340 Beerse Belgium
- COPLOSA, zona franca, sector E, calle L 10-20 08040 Barcelona Spain
- Du Pont Ibérica S.L., Avenida Diagonal, 571 ES-08029 Barcelona Spain
- Envigo Consulting Limited, Woolley Road Alconbury PE28 4HS Huntingdon Cambridgeshire United Kingdom
- ExxonMobil Petroleum & Chemical, BVBA, Polderdijkweg 2030 Antwerpen Belgium
- GMS Chemie-Handelsgesellschaft m.b.H., Mönckebergstraße 13 20095 Hamburg Germany
- IMR metal powder technologies GmbH, Jessenigst 4 9220 Lind ob Velden Kärnten Austria
- ITACA, S.A., Partida Rambleta s/n 12191 Poble Ternes Castellón Spain
- KTR Europe GmbH, Mergenthalerallee 77 65760 Eschborn Germany
- LANXESS Sales Netherlands B.V., Ankerweg 18 1041AT Amsterdam Netherlands
- LANXESS SOLUTIONS UK LTD (MX01), Tenax Road M17 1WT Manchester United Kingdom
- Minmetals North Europe AB, ARENAVGEN 41, BOX 10114 121 28 STOCKHOLM GLOBEN 10114 STOCKHOLM Sweden
- NetSun EU B.V., Blaak 40, Fifth floor 3011TA Rotterdam Netherlands
- PRODUCTOS ESEBE SL, Gran Bretaña 26 nave 1 08700 Igualada Barcelona Spain
- PRODUITS CHIMIQUES DE LUCETTE, ZI DE LA VALLEE VERTE 53940 LE GENEST SAINT ISLE France
- QUIMIALMEL ITALIA S.P.A., VIA GHIAROLA VECCHIA, 101 41042 FIORANO MODENESE MODENA Italy
- S.Goldmann GmbH & Co. KG, Schillerstr. 79 33609 Bielefeld Germany
- SABIC Innovative Plastics BV, Plasticolaan 1 4612 PX Bergen op Zoom Netherlands Netherlands
- SAFIC ALCAN ESPECIALIDADES, S.A.U, Calle Rocafort, 241-243 08029 BARCELONA Spain
- SCAS Europe S.A./N.V., Leonardo Da Vincilaan 19 B-1831 Diegem Belgium
- SICA, Rue Géo Lufbery 02300 Chauny France France
- Teknor Apex BV, Mijweg 1 Mijweg 1, (P.O.Box 601, 6160 AP) 6167AC Geleen Please select Netherlands
- Traxys Metales y Químicos SLI, Manuel Ferrero, 13 - Bajo 28036 Madrid Spain

Inactive

- NetSun EU B.V., Blaak 40, Fifth floor 3011TA Rotterdam Netherlands

Other names

IUPAC names

- (stibanyloxy)stibanediol
-
- 1309-64-4
- antimony trioxide
- antimony trioxide
- Antimony
- Antimony (III) oxide
- Antimony oxide
- Antimony oxide (Sb2O3)
- ANTIMONY TRIOXIDE
- Antimony Trioxide
- antimony trisulphide
- antimony(3+) oxide
- Antimony(III) oxide
- diantimony trioxide
- Diantimontrioxid
- diantimony trioxid
- Diantimony Trioxide
- Diantimony trioxide_049
- Diantimony trioxide_068
- diantimony-trioxide-
- Dioxodistiboxane
- not available
- oxo(oxostibanyloxy)stibane
- Oxo(oxostibanyloxy)stibane / antimony(3+); oxygen(2-)
- oxostibanyl stibinate
- triossido di diantimonio

Regulatory processes names

- antimony trioxide
- Diantimony trioxide

Trade names

- Antimonio triossido
- Antimony Trioxide
- Antimony Trioxide TMS®-HP
- ATO
- Diantimony trioxide
- Dust-free antimony trioxide
- flame retardant masterbatch
- Timonox® Blue Star

Other names

Scientific properties

Surface tension				
Study results	1 study submitted 0 studies processed	Type of Study provided	Summaries	0 summaries submitted 0 summaries processed
<input type="checkbox"/> No automatically processable data submitted		Studies with data: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Data waiving: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 1 Other:	<input type="checkbox"/> No data available

Flash point				
Study results	1 study submitted 0 studies processed	Type of Study provided	Summaries	0 summaries submitted 0 summaries processed
<input type="checkbox"/> No automatically processable data submitted		Studies with data: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Data waiving: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 1 Other:	<input type="checkbox"/> No data available

Auto flammability				
Study results	1 study submitted 0 studies processed	Type of Study provided	Summaries	0 summaries submitted 0 summaries processed
<input type="checkbox"/> No automatically processable data submitted		Studies with data: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Data waiving: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 1 Sci. unjustified:	<input type="checkbox"/> No data available

Flammability				
Study results	3 studies submitted 0 studies processed	Type of Study provided	Summaries	0 summaries submitted 0 summaries processed
<input type="checkbox"/> No automatically processable data submitted		Studies with data: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Data waiving: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 3 Sci. unjustified:	<input type="checkbox"/> No data available

Explosiveness				
Study results	1 study submitted 0 studies processed	Type of Study provided	Summaries	0 summaries submitted 0 summaries processed
<input type="checkbox"/> No automatically processable data submitted		Studies with data: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Data waiving: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 1 Sci. unjustified:	<input type="checkbox"/> No data available

Oxidising				
Study results	1 study submitted 0 studies processed	Type of Study provided	Summaries	0 summaries submitted 0 summaries processed
<input type="checkbox"/> No automatically processable data submitted		Studies with data: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Data waiving: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 1 Other:	<input type="checkbox"/> No data available

Oxidation reduction potential ☐ Data not provided by the registrant

pH ☐ Data not provided by the registrant

Dissociation constant				
Study results	1 study submitted 0 studies processed	Type of Study provided	Summaries	0 summaries submitted 0 summaries processed
<input type="checkbox"/> No automatically processable data submitted		Studies with data: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Data waiving: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 1 Sci. unjustified:	<input type="checkbox"/> No data available

Viscosity				
Study results	1 study submitted 0 studies processed	Type of Study provided	Summaries	0 summaries submitted 0 summaries processed
<input type="checkbox"/> No automatically processable data submitted		Studies with data: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Data waiving: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 1 Sci. unjustified:	<input type="checkbox"/> No data available

Environmental fate and pathways

This section provides environmental fate and pathways information compiled from all automatically processable data from REACH registration dossiers that is available to ECHA at the time of generation. The quality and correctness of the information remains the responsibility of the data submitter. The Agency thus cannot guarantee the correctness of the information displayed.

Phototransformation in air ☐ Data not provided by the registrant

Predicted No-Effect Concentration (PNEC)

R Summaries

1 summary submitted
1 summary processed

The Predicted No-Effect Concentration (PNEC) value is the concentration of a substance below which adverse effects in the environment are not expected to occur. Please note that when more than one summary is provided, PNEC values may refer to constituents of the substance and not to the substance as a whole. More detailed information is available in the dossiers.

Hazard for Aquatic Organisms

Freshwater	113 µg/L (1)
Intermittent releases (freshwater)	-
Marine water	11.3 µg/L (1)
Intermittent releases (marine water)	-
Sewage treatment plant (STP)	2.55 mg/L (1)
Sediment (freshwater)	11.2 mg/kg sediment dw (1)
Sediment (marine water)	2.24 mg/kg sediment dw (1)

Hazard for Air

Air

Hazard for Terrestrial Organism

Soil 37 mg/kg soil dw (1)

Hazard for Predators

Secondary poisoning

Short-term toxicity to fish

Study results 35 studies submitted
2 studies processed

Type of Study provided

Summaries

0 summaries submitted
0 summaries processed

P/R Results

LC50 (4 days) 6.9 - 14.4 mg/L [2]
LC50 (72 h) 6.9 mg/L [1]
LC50 (48 h) 6.9 - 17.4 mg/L [2]
LC50 (24 h) 6.9 - 20.8 mg/L [2]

Studies with data

Key study

Supporting study

Other

Δ	Δ	Δ	Δ
2			
8			
20	5		

Data waiving

no waivers

Δ No data available

Long-term toxicity to fish

Study results 11 studies submitted
1 study processed

Type of Study provided

Summaries

0 summaries submitted
0 summaries processed

P/R Results

NOEC (28 days) 1.13 - 4.5 mg/L [3]
LOEC (28 days) 2.31 - 9.31 mg/L [3]

Studies with data

Key study

Supporting study

Other

Δ	Δ	Δ	Δ
1			
6			
2	3		

Data waiving

no waivers

Δ No data available

Short-term toxicity to aquatic invertebrates

Study results 40 studies submitted
1 study processed

Type of Study provided

Summaries

0 summaries submitted
0 summaries processed

P/R Results

LC50 (4 days) 1.77 mg/L [1]
NOEC (4 days) 1.11 mg/L [1]
LOEC (4 days) 1.5 mg/L [1]

Studies with data

Key study

Supporting study

Other

Δ	Δ	Δ	Δ
1			
13			
5	21		

Data waiving

no waivers

Δ No data available

Long-term toxicity to aquatic invertebrates

Study results 5 studies submitted
1 study processed

Type of Study provided

Summaries

0 summaries submitted
0 summaries processed

P/R Results

NOEC (21 days) 1.74 - 3.13 mg/L [2]
LOEC (21 days) 3.13 - 5.86 mg/L [2]
EC50 (21 days) 3.82 - 4.86 mg/L [2]
LC50 (21 days) 4.77 mg/L [1]

Studies with data

Key study

Supporting study

Other

Δ	Δ	Δ	Δ
1			
3			
1			

Data waiving

no waivers

Δ No data available

Toxicity to aquatic algae and cyanobacteria

Study results 15 studies submitted
1 study processed

Type of Study provided

Summaries

0 summaries submitted
0 summaries processed

P/R Results

EC50 (72 h) 36.6 mg/L [2]
NOEC (72 h) 2.11 mg/L [2]
LOEC (72 h) 4 mg/L [2]

Studies with data

Key study

Supporting study

Weight of evidence

Other

Δ	Δ	Δ	Δ
1			
1			
1			
6	6		

Data waiving

no waivers

Δ No data available

Toxicity to birds		Type of Study provided		Summaries	
Study results	1 study submitted 0 studies processed			0 summaries submitted 0 summaries processed	
<input checked="" type="checkbox"/> No automatically processable data submitted		Studies with data	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Data waiving	<input checked="" type="checkbox"/> No data available
		Other	1		

Toxicity to mammals
<input checked="" type="checkbox"/> Data not provided by the registrant

Toxicological information

This section provides toxicological information compiled from all automatically processable data from REACH registration dossiers that is available to ECHA at the time of generation. The quality and correctness of the information remains the responsibility of the data submitter. The Agency thus cannot guarantee the correctness of the information displayed.

Derived No- or Minimal Effect Level (DN(M)EL)			1 summary submitted 1 summary processed		
<input checked="" type="checkbox"/> M/C Summaries					
The derived no- or minimum effect level (DN(M)EL) is the level of exposure above which a human should not be exposed to a substance. Please note that when more than one summary is provided, DN(M)EL values may refer to constituents of the substance and not to the substance as a whole. More detailed information is available in the dossiers.					
Data for WORKERS			Data for the GENERAL POPULATION		
INHALATION Exposure	Threshold	Most sensitive study	INHALATION Exposure	Threshold	Most sensitive study
Systemic Effects			Systemic Effects		
Long-term:	-	-	Long-term:	-	-
Acute /short term:	-	-	Acute /short term:	-	-
Local Effects			Local Effects		
Long-term:	(DNEL) 500 µg/m³	repeated dose toxicity	Long-term:	(DNEL) 100 µg/m³	repeated dose toxicity
Acute /short term:	-	-	Acute /short term:	-	-
DERMAL Exposure	Threshold	Most sensitive study	DERMAL Exposure	Threshold	Most sensitive study
Systemic Effects			Systemic Effects		
Long-term:	(DNEL) 281 mg/kg bw/day	repeated dose toxicity	Long-term:	(DNEL) 168.6 mg/kg bw/day	repeated dose toxicity
Acute /short term:	-	-	Acute /short term:	-	-
Local Effects			Local Effects		
Long-term:	-	-	Long-term:	-	-
Acute /short term:	-	-	Acute /short term:	-	-
EYE Exposure	Threshold	Most sensitive study	ORAL Exposure	Threshold	Most sensitive study
Systemic Effects			Systemic Effects		
Long-term:	(DNEL) 168.6 mg/kg bw/day	repeated dose toxicity	Long-term:	(DNEL) 168.6 mg/kg bw/day	repeated dose toxicity
Acute /short term:	-	-	Acute /short term:	-	-
EYE Exposure			EYE Exposure		
No hazard identified			No hazard identified		

Toxicokinetics, metabolism, and distribution		Summaries	
Study results	Type of Study provided	0 summaries submitted 0 summaries processed	
Study data: basic toxicokinetics		<input checked="" type="checkbox"/> No data available	
<input checked="" type="checkbox"/> Study data not processed for brief profile		Studies with data	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
		Key study	1
		Supporting study	11
		Other	1
Study data: dermal absorption			
<input checked="" type="checkbox"/> Study data not processed for brief profile		Studies with data	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
		Key study	1
		Data waiving	no waivers

Sensitisation

Study results

Type of Study provided

Summaries

0 summaries submitted
0 summaries processed

Study data: skin

⚠ No data available

⚠ Study data not processed for brief profile

Studies with data	⚠	📄	📄	⚠	Data waiving
Key study	1				no waivers
Supporting study	2				

Study data: respiratory

⚠ Study data not processed for brief profile

Studies with data	⚠	📄	📄	⚠	Data waiving
					no waivers

Repeated dose toxicity

Study results

Type of Study provided

Summaries

0 summaries submitted
0 summaries processed

Study data: oral

9 studies submitted
0 studies processed

Study data: oral

⚠ No data available

⚠ No automatically processable data submitted

Studies with data	⚠	📄	📄	⚠	Data waiving
Key study	1				no waivers
Supporting study	8				

Study data: inhalation

9 studies submitted
1 study processed

Study data: inhalation

P/R Results

NOAEC (rat): 510 µg/m³ air [1]

LOAEC (rat): 4.5 mg/m³ air [1]

Studies with data	⚠	📄	📄	⚠	Data waiving
Key study	1				no waivers
Supporting study	8				

Study data: dermal

1 study submitted
0 studies processed

Study data: dermal

⚠ No automatically processable data submitted

Studies with data	⚠	📄	📄	⚠	Data waiving
					Other 1

Genetic toxicity

Study results

Type of Study provided

Summaries

0 summaries submitted
0 summaries processed

Study data: in vitro

⚠ No data available

⚠ Study data not processed for brief profile

Studies with data	⚠	📄	📄	⚠	Data waiving
Key study	3				no waivers
Supporting study	5				

Study data: in vivo

⚠ Study data not processed for brief profile

Studies with data	⚠	📄	📄	⚠	Data waiving
Key study	5				no waivers
Supporting study	2				