



Bismuth, Cadmium, Tin, Lead alloy (10-30% cadmium)

Safety Data Sheet

according to the United Nations GHS (Rev. 5, 2013)

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SECTION 1: Identification

1.1. Product identifier

Product form : Mixture
Product name : Bismuth, Cadmium, Tin, Lead alloy (10-30% cadmium)
Type of product : Alloy

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

Use of the substance/mixture : Industrial uses: Uses of substances as such or in preparations* at industrial sites
Base metals and alloys
Metal articles

1.3. Supplier's details

5N Plus Lübeck GmbH
Kaninchenborn 24-28
23560 Lübeck - Germany
T 49451530040
MSDS@5nplus.com

1.4. Emergency telephone number

Emergency number : ChemTel Contract Number MIS5311335
USA and Canada: +1-800-255-3924 (toll free), Australia: +1-300-954-583, Brazil: +0-800-591-6042, China: +400-120-0751, India: +000-800-100-4086, Mexico: +01800-099-0731,
International phone number : +1-813-248-0585 (collect calls accepted)

Country	Organisation/Company	Address	Emergency number	Comment
Australia	NSW Poisons Information Centre The Children's Hospital at Westmead	Locked Bag 4001 NSW 2145 Westmead	13 11 26	
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
Israel	Israel Poison Information Center Rambam Health Care Campus	6 Ha'Aliya Street 31096 Haifa	+972 4 854 1900	
Jordan	National Drug & Poison Information Center of Jordan		0798506755 00962-6-5353444	
Malta	Medicines & Poisons Info Office	Mater Dei Hospital MSD Msida	+356 2545 6504	
Saudi Arabia	Poison Control Center-Riyadh	General Directorate of Health Affairs Medial Province	+966 112324180 +966 112324189	
United Arab Emirates	Health Authority – Abu Dhabi (HAAD) Poison & Drug Information Center (PDIC)	P.O. Box 5674 Abu Dhabi	+ 800-424	
United Kingdom	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA Belfast	0344 892 0111	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to the United Nations GHS

Acute toxicity (inhalation:dust,mist) Category 2 H330
Germ cell mutagenicity, Category 2 H341
Carcinogenicity, Category 1B H350
Reproductive toxicity, Category 1A H360
Reproductive toxicity, Additional category, Effects on or via lactation H362
Specific target organ toxicity — Repeated exposure, Category 1 H372
Hazardous to the aquatic environment — Acute Hazard, Category 1 H400
Hazardous to the aquatic environment — Chronic Hazard, Category 1 H410
Full text of H statements : see section 16

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2.2. Label elements

Labelling according to the United Nations GHS

Hazard pictograms (GHS-UN) :



Signal word (GHS-UN) :

Danger

Hazardous ingredients :

Cadmium; Lead

Hazard statements (GHS-UN) :

H330 - Fatal if inhaled.
H341 - Suspected of causing genetic defects.
H350 - May cause cancer.
H360 - May damage fertility or the unborn child.
H362 - May cause harm to breast-fed children.
H372 - Causes damage to organs through prolonged or repeated exposure.
H410 - Very toxic to aquatic life with long lasting effects.

Precautionary statements (GHS-UN) :

P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P263 - Avoid contact during pregnancy and while nursing.
P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P284 - [In case of inadequate ventilation] wear respiratory protection.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P310 - Immediately call a POISON CENTER or doctor.
P314 - Get medical advice/attention if you feel unwell.
P320 - Specific treatment is urgent (see supplemental first aid instruction on this label).
P391 - Collect spillage.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

Adverse physicochemical, human health and environmental effects :

May cause cancer, Suspected of causing genetic defects, May cause harm to breast-fed children, May damage fertility or the unborn child, Causes damage to organs through prolonged or repeated exposure, Fatal if inhaled, Very toxic to aquatic life with long lasting effects.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to the United Nations GHS
Bismuth	(CAS-No.) 7440-69-9	30 - 60	Not classified
Cadmium	(CAS-No.) 7440-43-9	10 - 30	Acute Tox. 2 (Inhalation: dust, mist), H330 Muta. 2, H341 Carc. 1B, H350 Repr. 2, H361 STOT RE 1, H372 Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410
Tin	(CAS-No.) 7440-31-5	10 - 30	Not classified
Lead	(CAS-No.) 7439-92-1	10 - 30	Lact., H362 Repr. 1A, H360 STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H-statements: see section 16

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SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Call a physician immediately.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a physician immediately. Call a doctor.
- First-aid measures after skin contact : Wash skin with plenty of water.
- First-aid measures after eye contact : Rinse eyes with water as a precaution.
- First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

No additional information available

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 : Dry powder. Foam. Water spray.

5.2. Special hazards arising from the substance or mixture

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Mechanically recover the product. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Wear personal protective equipment. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Avoid contact during pregnancy/while nursing. Do not breathe dust/fume/gas/mist/vapours/spray.

Hygiene measures : Separate working clothes from town clothes. Launder separately. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep container tightly closed.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Bismuth (7440-69-9)		
Bulgaria	OEL TWA (mg/m ³)	5 mg/m ³
Latvia	OEL TWA (mg/m ³)	0.5 mg/m ³
Lithuania	IPRV (mg/m ³)	0.5 mg/m ³

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Cadmium (7440-43-9)		
Austria	TEL TRK (mg/m ³)	0.03 mg/m ³ (battery manufacturing, thermal productions of Zinc, Lead and Copper, welding of Cadmium containing alloys-inhalable fraction) 0.015 mg/m ³ (all others-inhalable fraction)
Austria	OEL chemical category (AT)	Group A2 Carcinogen
Belgium	Limit value (mg/m ³)	0.002 mg/m ³ (alveolar particulates) 0.01 mg/m ³ (inhalable particulate)
Belgium	OEL chemical category (BE)	Carcinogen
Bulgaria	OEL TWA (mg/m ³)	0.05 mg/m ³
Croatia	GVI (granična vrijednost izloženosti) (mg/m ³)	0.025 mg/m ³
Croatia	OEL chemical category (HR)	Carcinogen category 2 Reproductive Toxin category 3
Czech Republic	Expoziční limity (PEL) (mg/m ³)	0.05 mg/m ³
Czech Republic	OEL chemical category (CZ)	Potential for cutaneous absorption
Denmark	Grænseværdie (langvarig) (mg/m ³)	0.005 mg/m ³ (dust, fume and powder)
Estonia	OEL TWA (mg/m ³)	0.05 mg/m ³ (total dust) 0.01 mg/m ³ (respirable dust)
Estonia	OEL chemical category (ET)	Carcinogenic substance
Finland	HTP-arvo (8h) (mg/m ³)	0.004 mg/m ³ (respirable)
Finland	OEL chemical category (FI)	Potential for cutaneous absorption
France	VME (mg/m ³)	0.05 mg/m ³
France	OEL chemical category (FR)	Carcinogen categories 1A, 1B, 2 Mutagen categories 1A, 1B, 2 Reproductive Toxin categories 1A, 1B, 2
Greece	OEL TWA (mg/m ³)	0.025 mg/m ³
Greece	OEL STEL (mg/m ³)	0.1 mg/m ³
Hungary	MK-érték	0.015 mg/m ³
Hungary	OEL chemical category (HU)	Carcinogenic substance
Ireland	OEL (8 hours ref) (mg/m ³)	0.025 mg/m ³
Ireland	OEL (15 min ref) (mg/m ³)	0.075 mg/m ³ (calculated)
Ireland	OEL chemical category (IE)	Carc1B
Latvia	OEL TWA (mg/m ³)	0.01 mg/m ³
Lithuania	IPRV (mg/m ³)	0.05 mg/m ³ (inhalable fraction) 0.01 mg/m ³ (respirable fraction)
Lithuania	OEL chemical category (LT)	Carcinogen inhalable and respirable fraction
Poland	NDS (mg/m ³)	0.01 mg/m ³ (inhalable fraction) 0.002 mg/m ³ (respirable fraction)
Portugal	OEL TWA (mg/m ³)	0.01 mg/m ³
Portugal	OEL chemical category (PT)	A2 - Suspected Human Carcinogen
Romania	OEL TWA (mg/m ³)	0.05 mg/m ³
Romania	OEL chemical category (RO)	Substances which may cause cancer
Slovenia	OEL TWA (mg/m ³)	0.03 mg/m ³ (inhalable fraction, dust, aerosols) 0.015 mg/m ³ (inhalable fraction, dust, aerosols)
Slovenia	OEL STEL (mg/m ³)	0.12 mg/m ³ (inhalable fraction, dust, aerosols) 0.06 mg/m ³ (other-inhalable fraction, dust, aerosols)
Slovenia	OEL chemical category (SL)	Category 1B in the form of dust and aerosol
Spain	VLA-ED (mg/m ³)	0.01 mg/m ³ (manufacturing, commercialization and use restrictions according to REACH-inhalable fraction) 0.002 mg/m ³ (manufacturing, commercialization and use restrictions according to REACH-respirable fraction) 0.01 mg/m ³ (manufacturing, commercialization and use restrictions according to REACH) 0.002 mg/m ³ (manufacturing, commercialization and use restrictions according to REACH)
Spain	OEL chemical category (ES)	C1B inhalable fraction C1B inhalable fraction
Sweden	nivågränsvärde (NVG) (mg/m ³)	0.02 mg/m ³ (total dust) 0.005 mg/m ³ (respirable dust)

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Cadmium (7440-43-9)		
Sweden	OEL chemical category (SE)	Carcinogen
United Kingdom	WEL TWA (mg/m ³)	0.025 mg/m ³
United Kingdom	WEL STEL (mg/m ³)	0.075 mg/m ³ (calculated)
United Kingdom	WEL chemical category	Capable of causing cancer and/or heritable genetic damage
Norway	Grenseverdier (AN) (mg/m ³)	0.05 mg/m ³
Norway	Grenseverdier (Korttidsverdi) (mg/m ³)	0.15 mg/m ³ (value calculated)
Norway	OEL chemical category (NO)	Carcinogen
Switzerland	MAK (mg/m ³)	0.015 mg/m ³ (inhalable dust) 0.004 mg/m ³ (respirable dust)
Switzerland	OEL chemical category (CH)	Category C1B carcinogen Category 2 developmental toxin Category 2 mutagen Category 2 reproductive toxin Skin notation
Australia	TWA (mg/m ³)	0.01 mg/m ³
Canada (Quebec)	VEMP (mg/m ³)	0.025 mg/m ³
USA - ACGIH	ACGIH TWA (mg/m ³)	0.01 mg/m ³ 0.002 mg/m ³ (respirable particulate matter)
USA - IDLH	US IDLH (mg/m ³)	9 mg/m ³ (dust)
USA - OSHA	OSHA PEL (TWA) (mg/m ³)	0.1 mg/m ³ (fume) 0.2 mg/m ³ (dust) 5 µg/m ³
USA - OSHA	OSHA PEL (Ceiling) (mg/m ³)	0.3 mg/m ³ (applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect-fume) 0.6 mg/m ³ (applies to any operations or sectors for which the Cadmium standard is stayed or otherwise not in effect-dust)
China	OEL TWA	0.01 mg/m ³
China	OEL STEL	0.02 mg/m ³
China	OEL chemical category (CN)	Carcinogenic to humans
China	Highly Toxic Goods - Time-Weighted Averages (TWAs)	0.01 mg/m ³
China	Highly Toxic Goods - Short-Term Exposure Limits (STELs)	0.02 mg/m ³
China	Catalogue of Occupational Hazard Factors	Category 3 - Chemicals
India	PEL TWA (mg/m ³)	0.05 mg/m ³ (dust)
Japan	Japan administration level	0.05mg/m ³ (as Cd)
Japan	Exposure limits (JSOH)	0.05mg/m ³ (as Cd)
Japan	Exposure limits (ACGIH)	TWA 0.01 mg/m ³ ,0.002 mg/m ³ (R),STEL - (as Cd)
Korea	ISHA	Hazardous Substances Subject to Control - Metal
Korea	ISHA TWA (mg/m ³)	0.01 mg/m ³
Korea	ISHA - Permissible Exposure Limits - TWAs (mg/m ³)	0.01 mg/m ³
Singapore	OEL PEL (mg/m ³)	0.01 mg/m ³
Taiwan	OEL TWA (mg/m ³)	0.05 mg/m ³
Taiwan	OEL STEL (mg/m ³)	0.15 mg/m ³
Thailand	OEL TWA (mg/m ³)	0.2 mg/m ³ (dust)
Thailand	OEL Ceilings (mg/m ³)	0.6 mg/m ³ (dust)
Tin (7440-31-5)		
Austria	MAK (mg/m ³)	2 mg/m ³ (inhalable fraction)
Austria	MAK Short time value (mg/m ³)	4 mg/m ³ (inhalable fraction)
Belgium	Limit value (mg/m ³)	2 mg/m ³
Belgium	OEL chemical category (BE)	Skin
Bulgaria	OEL TWA (mg/m ³)	0.1 mg/m ³ 2 mg/m ³
Croatia	GVI (granična vrijednost izloženosti) (mg/m ³)	2 mg/m ³
Cyprus	OEL TWA (mg/m ³)	2 mg/m ³

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Tin (7440-31-5)		
Finland	HTP-arvo (8h) (mg/m ³)	2 mg/m ³
Greece	OEL TWA (mg/m ³)	2 mg/m ³
Ireland	OEL (8 hours ref) (mg/m ³)	2 mg/m ³
Ireland	OEL (15 min ref) (mg/m ³)	6 mg/m ³ (calculated)
Malta	OEL TWA (mg/m ³)	2 mg/m ³
Poland	NDS (mg/m ³)	2 mg/m ³ (inhalable fraction)
Portugal	OEL TWA (mg/m ³)	2 mg/m ³
Slovenia	OEL TWA (mg/m ³)	0.1 mg/m ³ (inhalable fraction) 2 mg/m ³
Slovenia	OEL chemical category (SL)	Potential for cutaneous absorption
Spain	VLA-ED (mg/m ³)	2 mg/m ³
Sweden	nivågränsvärde (NVG) (mg/m ³)	2 mg/m ³ (total inhalable dust)
Switzerland	OEL chemical category (CH)	Skin notation
Australia	TWA (mg/m ³)	2 mg/m ³
Canada (Quebec)	VEMP (mg/m ³)	2 mg/m ³
USA - ACGIH	ACGIH TWA (mg/m ³)	2 mg/m ³
USA - IDLH	US IDLH (mg/m ³)	100 mg/m ³
USA - NIOSH	NIOSH REL (TWA) (mg/m ³)	2 mg/m ³
China	Catalogue of Occupational Hazard Factors	Category 1 - Dusts
Japan	Exposure limits (ACGIH)	TWA 2 mg/m ³ , STEL - (as Sn Metal)
Korea	ISHA	Hazardous Substances Subject to Control - Metal
Korea	ISHA TWA (mg/m ³)	2 mg/m ³ (metal)
Singapore	OEL PEL (mg/m ³)	2 mg/m ³
Taiwan	OEL TWA (mg/m ³)	2 mg/m ³
Taiwan	OEL STEL (mg/m ³)	4 mg/m ³
Lead (7439-92-1)		
Austria	MAK (mg/m ³)	0.1 mg/m ³ (inhalable fraction)
Austria	MAK Short time value (mg/m ³)	0.4 mg/m ³ (inhalable fraction)
Bulgaria	OEL TWA (mg/m ³)	0.05 mg/m ³
Cyprus	OEL TWA (mg/m ³)	0.15 mg/m ³
Czech Republic	Expoziční limity (PEL) (mg/m ³)	0.05 mg/m ³
Denmark	Grænseværdie (langvarig) (mg/m ³)	0.05 mg/m ³ (dust, fume and powder)
Estonia	OEL TWA (mg/m ³)	0.1 mg/m ³ (total dust) 0.05 mg/m ³ (respirable dust)
Estonia	OEL chemical category (ET)	Reproductive toxin
Finland	HTP-arvo (8h) (mg/m ³)	0.1 mg/m ³ (all works)
France	VME (mg/m ³)	0.1 mg/m ³ (restrictive limit)
France	OEL chemical category (FR)	Carcinogen categories 1A, 1B, 2 Reproductive Toxin categories 1A, 1B, 2
Germany	TRGS 903 (BGW)	300 µg/l Parameter: Lead - Medium: whole blood - Sampling time: no restriction (women age below 45 years) 400 µg/l Parameter: Lead - Medium: whole blood - Sampling time: no restriction (women 45 years and older)
Gibraltar	Eight hours mg/m ³	0.15 mg/m ³
Greece	OEL TWA (mg/m ³)	0.15 mg/m ³
Hungary	AK-érték	0.15 mg/m ³
Netherlands	Grenswaarde TGG 8H (mg/m ³)	0.15 mg/m ³
Canada (Quebec)	VEMP (mg/m ³)	0.05 mg/m ³
USA - ACGIH	ACGIH TWA (mg/m ³)	0.05 mg/m ³

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

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8.3. Individual protection measures, such as personal protective equipment (PPE)

Hand protection	: Protective gloves
Eye protection	: Safety glasses
Skin and body protection	: Wear suitable protective clothing
Respiratory protection	: [In case of inadequate ventilation] wear respiratory protection.

8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: metallic solid.
Colour	: No data available
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
pH solution	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Relative evaporation rate (ether=1)	: No data available
Melting point	: No data available
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Vapour pressure at 50 °C	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: Not applicable
Relative density of saturated gas/air mixture	: No data available
Density	: No data available
Relative gas density	: No data available
Solubility	: Insoluble.
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: Not applicable
Viscosity, kinematic (calculated value) (40 °C)	: No data available
Explosive properties	: Not classified.
Oxidising properties	: Not classified.
Explosive limits	: Not applicable
Lower explosive limit (LEL)	: No data available
Upper explosive limit (UEL)	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

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10.5. Incompatible materials

Oxidizing agent. Strong acids.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Inhalation:dust,mist: Fatal if inhaled.

ATE UN (dust,mist)	0.167 mg/l/4h
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Bismuth (7440-69-9)	
LD50 oral rat	5 g/kg
LD50 oral	5000 mg/kg

Cadmium (7440-43-9)	
LC50 inhalation rat (mg/l)	4.6 - 8.4 mg/m ³ (3 h)

Tin (7440-31-5)	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 4.75 mg/l/4h

Lead (7439-92-1)	
LD50 oral rat	> 2000 mg/kg Read-across from Lead oxide
LD50 dermal rat	> 200 mg/kg
LC50 inhalation rat (mg/l)	> 5.05 mg/l/4h

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Suspected of causing genetic defects.
Carcinogenicity : May cause cancer.
Reproductive toxicity : May damage fertility or the unborn child. May cause harm to breast-fed children.
STOT-single exposure : Not classified
STOT-repeated exposure : Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Very toxic to aquatic life with long lasting effects.
Acute aquatic toxicity : Very toxic to aquatic life.
Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

Cadmium (7440-43-9)	
LC50 fish 1	0.003 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through])
LC50 fish 2	0.006 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 Daphnia 1	0.0244 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])

Tin (7440-31-5)	
LC50 fish 1	> 12.4 Pimephales promelas
EC50 72h algae (1)	> 19.2 mg/l pseudokirchnerella subcapitata

Lead (7439-92-1)	
LC50 fish 1	107 µg/l Oncorhynchus mykiss (pH>6.5-8.5)
LC50 fish 2	194.2 µg/l Pimephales promelas (pH>5.5-8.5)
EC50 Daphnia 1	107.5 µg/l 48h EC50 (pH>7.5-8.5)
EC50 Daphnia 2	73.6 µg/l Ceriodaphnia dubia 48h EC50 (pH>5.5-8.5)
EC50 72h algae (1)	52 µg/L Pseudokirchneriella subcapitata (pH>6.5-7.5)
EC50 72h algae (2)	233.1 µg/L Pseudokirchneriella subcapitata (pH<7.5-8.5)

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Lead (7439-92-1)	
NOEC (chronic)	9.2 µg/L Mytilus trossolus (48h, developmental abnormalities, dissolved lead, Marine water)
NOEC chronic crustacea	8.2 Hyalella azteca (42d, mortality, dissolved lead, Freshwater)

12.2. Persistence and degradability

Bismuth, Cadmium, Tin, Lead alloy (10-30% cadmium)	
Persistence and degradability	No additional information available

12.3. Bioaccumulative potential

Bismuth, Cadmium, Tin, Lead alloy (10-30% cadmium)	
Bioaccumulative potential	No additional information available

12.4. Mobility in soil

Bismuth, Cadmium, Tin, Lead alloy (10-30% cadmium)	
Mobility in soil	No additional information available

12.5. Other adverse effects

Ozone	: Not classified
Other adverse effects	: No additional information available




SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with IMDG / IATA / UN RTDG

UN RTDG	IMDG	IATA
14.1. UN number		
Not regulated for transport		
14.2. Proper Shipping Name		
Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)		
Not applicable	Not applicable	Not applicable
		
14.4. Packing group		
Not applicable	Not applicable	Not applicable
14.5. Environmental hazards		
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes
No supplementary information available		

14.6. Special precautions for user

- UN RTDG

No data available

- IMDG

No data available

- IATA

No data available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health, and environmental national regulations specific for the product

No additional information available

Bismuth, Cadmium, Tin, Lead alloy (10-30% cadmium)

Safety Data Sheet

according to the United Nations GHS (Rev. 5, 2013)

SECTION 16: Other information

SDS Major/Minor : None
Date of issue : 17/11/2016
Revision date : 26/04/2018
Supersedes : 07/08/2017

Full text of H-statements:

H330	Fatal if inhaled.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H360	May damage fertility or the unborn child.
H361	Suspected of damaging fertility or the unborn child.
H362	May cause harm to breast-fed children.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

SDS UN

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product