SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:
Regulation (EC) No. 1907/2006 and Regulation (EC) No. 1272/2008

Revision date	18-Feb-2022	**Previous revision date**	18-Sep-2020	**Revision Number**	1

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

1.1. Product identifier

Product Name Lyphochek Whole Blood Metals Control

Catalogue Number(s) 527, 528, 529, 528X

Pure substance/mixture Mixture

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

Recommended use In vitro diagnostic

Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Corporate Headquarters
Bio-Rad Laboratories Inc.
1000 Alfred Nobel Drive
Hercules, CA 94547
USA

Manufacturer
Bio-Rad Laboratories Inc.
9500 Jeronimo Road
Irvine, California 92618
USA

Legal Entity / Contact Address
Bio-Rad Laboratories Ltd
The Junction
Station Road
Watford, WD17 1ET
UK

For further information, please contact

Technical Service 00800 00246 723
Techsupport.UK@bio-rad.com

1.4. Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC UK: 44-870-8200418

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Chronic aquatic toxicity	Category 3 - (H412)

2.2. Label elements

Hazard statements
H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements - EU (§28, 1272/2008)
P273 - Avoid release to the environment
P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

2.3. Other hazards

Harmful to aquatic life.
Contains human source material and / or potentially infectious components

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	Weight-%	REACH registration number	EC No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
Trade secret	20 - 35	No data available	.?	No data available	-	-	-
Trade secret	1 - 2.5	No data available	No information available	Eye Irrit. 2 (H319) STOT SE 3 (H335) Aquatic Chronic 3 (H412)	-	-	-
Thallium 7440-28-0	< 0.001	No data available	231-138-1	Acute Tox. 2 (H300) Acute Tox. 2 (H330) STOT RE 2 (H373) Aquatic Chronic 4 (H413)	-	-	-
Mercury 7439-97-6	< 0.001	No data available	231-106-7	Acute Tox. 2 (H330) Repr. 1B (H360D) STOT RE 1 (H372) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	STOT RE 2 :: C>=0.1%	-	-
Lead 7439-92-1	< 0.001	No data available	231-100-4	Repr. 1A (H360FD) Lact. (H362) (H362)	-	-	-
Cadmium 7440-43-9	< 0.001	No data available	231-152-8	Acute Tox. 2 (H330) Muta. 2 (H341) Carc. 1B (H350) Repr. 2 (H361fd) STOT RE 1 (H372) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	-	-	-
Arsenic oxide (As2O3) 1327-53-3	< 0.001	No data available	215-481-4	Acute Tox. 2 (H300) Skin Corr. 1B (H314) Carc. 1A (H350) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	-	-	-

Full text of H- and EUH-phrases: see section 16

Acute Toxicity Estimate
No information available

This product does not contain candidate substances of very high concern at a concentration >=0.1% (Regulation (EC) No. 1907/2006 (REACH), Article 59)

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation Remove to fresh air.

Eye contact Contains human source material and / or potentially infectious components. Call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Skin contact Wash with soap and water.

Ingestion Contains human source material and / or potentially infectious components. Call a physician.

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

Symptoms No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians Contains human source material and / or potentially infectious components.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical No information available.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Do not allow into any sewer, on the ground or into any body of water.

Methods for cleaning up Use:. Disinfectant. Clean contaminated surface thoroughly.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling Ensure adequate ventilation.

General hygiene considerations Follow universal and standard precautions for handling potentially infectious materials.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Store according to product and label instructions.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
Trade secret	-	-	-	TWA: 10.0 mg/m³	TWA: 10 mg/m³ STEL: 20 mg/m³
Thallium 7440-28-0	-	TWA: 0.1 mg/m³ STEL 1 mg/m³	-	TWA: 0.05 mg/m³	-
Mercury 7439-97-6	TWA: 0.02 mg/m³	TWA: 0.02 mg/m³ STEL 0.08 mg/m³ H*	-	TWA: 0.05 mg/m³ TWA: 0.02 mg/m³	TWA: 0.02 mg/m³
Lead 7439-92-1	TWA: 0.15 mg/m³	TWA: 0.1 mg/m³ STEL 0.4 mg/m³	-	TWA: 0.05 mg/m³	TWA: 0.15 mg/m³
Cadmium 7440-43-9	TWA: 0.001 mg/m³	-	-	TWA: 0.05 mg/m³	TWA: 0.025 mg/m³
Arsenic oxide (As2O3) 1327-53-3	TWA: 0.01 mg/m³	-	-	TWA: 0.05 mg/m³	TWA: 0.1 mg/m³

Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
Trade secret	-	-	-	TWA: 10 mg/m³	-
Thallium 7440-28-0	-	-	H*	-	TWA: 0.1 mg/m³ iho*
Mercury 7439-97-6	-	-	TWA: 0.02 mg/m³ H*	TWA: 0,02 mg/m³	TWA: 0.02 mg/m³ iho*
Lead 7439-92-1	-	-	TWA: 0.05 mg/m³	TWA: 0.1 mg/m³ TWA: 0.05 mg/m³	TWA: 0.1 mg/m³
Cadmium 7440-43-9	-	-	TWA: 0.005 mg/m³	TWA: 0.05 mg/m³ TWA: 0.01 mg/m³	TWA: 0.004 mg/m³
Arsenic oxide (As2O3) 1327-53-3	-	-	TWA: 0.01 mg/m³	TWA: 0.03 mg/m³	TWA: 0.01 ppm

Chemical name	France	Germany	Germany MAK	Greece	Hungary
Trade secret	TWA: 10 mg/m³	-	-	-	-

Thallium 7440-28-0	TWA: 0.1 mg/m³	-	-	-	-
Mercury 7439-97-6	TWA: 0.02 mg/m³ *	TWA: 0.02 mg/m³ H*	TWA: 0.02 mg/m³ Ceiling / Peak: 0.16 mg/m³ Skin	-	TWA: 0.02 mg/m³ b*
Lead 7439-92-1	TWA: 0.1 mg/m³	-	-	-	TWA: 0.15 mg/m³
Cadmium 7440-43-9	TWA: 0.05 mg/m³	-	Skin	-	Ceiling: 0.015 mg/m³
Arsenic oxide (As2O3) 1327-53-3	TWA: 0.2 mg/m³	-	Skin	-	Ceiling: 0.1 mg/m³ b*

Chemical name	Ireland	Italy	Italy REL	Latvia	Lithuania
Trade secret	TWA: 10 mg/m³ STEL: 20 mg/m³	-	-	TWA: 5 mg/m³	-
Thallium 7440-28-0	TWA: 0.02 mg/m³ STEL: 0.06 mg/m³ Sk*	-	-	-	-
Mercury 7439-97-6	TWA: 0.02 mg/m³ STEL: 0.06 mg/m³	TWA: 0.02 mg/m³ pelle*	-	TWA: 0.02 mg/m³	-
Lead 7439-92-1	TWA: 0.15 mg/m³ STEL: 0.45 mg/m³	TWA: 0.075 mg/m³	-	TWA: 0.05 mg/m³ STEL: 0.1 mg/m³	-
Cadmium 7440-43-9	TWA: 0.01 mg/m³ TWA: 0.002 mg/m³ STEL: 0.03 mg/m³ STEL: 0.006 mg/m³	-	-	TWA: 0.01 mg/m³ STEL: 0.05 mg/m³	-
Arsenic oxide (As2O3) 1327-53-3	TWA: 0.01 mg/m³ STEL: 0.03 mg/m³	-	-	TWA: 0.01 mg/m³ STEL: 0.04 mg/m³	-

Chemical name	Luxembourg	Malta	Netherlands	Norway	Poland
Thallium 7440-28-0	-	-	-	TWA: 0.1 mg/m³ STEL: 0.3 mg/m³ H*	STEL: 0.3 mg/m³ TWA: 0.1 mg/m³
Mercury 7439-97-6	-	-	TWA: 0.02 mg/m³	TWA: 0.02 mg/m³ Biological limit value: 30 µg Hg/g Creatinine STEL: 0.06 mg/m³	TWA: 0.02 mg/m³
Lead 7439-92-1	-	-	TWA: 0.15 mg/m³	TWA: 0.05 mg/m³ STEL: 0.15 mg/m³	TWA: 0.05 mg/m³
Cadmium 7440-43-9	-	-	TWA: 0.004 mg/m³	TWA: 0.05 mg/m³ STEL: 0.15 mg/m³	TWA: 0.01 mg/m³ TWA: 0.002 mg/m³
Arsenic oxide (As2O3) 1327-53-3	-	-	TWA: 0.0028 mg/m³	TWA: 0.01 mg/m³ STEL: 0.03 mg/m³	TWA: 0.01 mg/m³

Chemical name	Portugal	Romania	Slovakia	Slovenia	Spain
Trade secret	TWA: 10 mg/m³	-	-	-	TWA: 10 mg/m³
Thallium 7440-28-0	TWA: 0.1 mg/m³ P*	-	TWA: 0.1 mg/m³	-	TWA: 0.1 mg/m³ vía dérmica*
Mercury 7439-97-6	TWA: 0.02 mg/m³ P*	TWA: 0.02 mg/m³	TWA: 0.1 mg/m³ K*	TWA: 0.02 mg/m³ STEL: STEL mg/m³ K*	TWA: 0.02 mg/m³
Lead 7439-92-1	TWA: 0.15 mg/m³	TWA: 0.15 mg/m³	TWA: 0.15 mg/m³ TWA: 0.5 mg/m³	TWA: 0.1 mg/m³ STEL: STEL mg/m³	TWA: 0.15 mg/m³
Cadmium 7440-43-9	TWA: 0.01 mg/m³	TWA: 0.05 mg/m³	TWA: 0.03 mg/m³ TWA: 0.15 mg/m³ STEL: 0.15 mg/m³ STEL: 0.75 mg/m³	-	TWA: 0.01 mg/m³ TWA: 0.002 mg/m³
Arsenic oxide (As2O3) 1327-53-3	TWA: 0.01 mg/m³	TWA: 0.01 mg/m³ STEL: 0.1 mg/m³	TWA: 0.1 mg/m³ STEL: 0.5 mg/m³	TWA: 0.1 mg/m³ STEL: STEL mg/m³	TWA: 0.01 mg/m³

Chemical name	Sweden	Switzerland	United Kingdom
Trade secret	-	-	TWA: 10 mg/m³ STEL: 20 mg/m³

Thallium 7440-28-0	-	H*	-
Mercury 7439-97-6	-	TWA: 0.005 ppm TWA: 0.05 mg/m³ STEL: 0.04 ppm STEL: 0.4 mg/m³ H*	TWA: 0.02 mg/m³
Lead 7439-92-1	-	TWA: 0.1 mg/m³ STEL: 0.8 mg/m³	TWA: 0.15 mg/m³ STEL: 0.45 mg/m³
Cadmium 7440-43-9	-	TWA: 0.015 mg/m³ TWA: 0.004 mg/m³ H*	TWA: 0.025 mg/m³ STEL: 0.075 mg/m³
Arsenic oxide (As2O3) 1327-53-3	-	TWA: 0.1 mg/m³ H*	TWA: 0.1 mg/m³

Biological occupational exposure limits

Chemical name	European Union	Austria	Bulgaria	Croatia	Czech Republic
Mercury 7439-97-6	-	25 µg/g Creatinine - urine () - after end of work day, at the end of a work week/end of the shift	-	-	-
Lead 7439-92-1	70 µg/100 mL - blood (Lead) - no restriction 0.075 mg/m³ - air (Lead) - 40 hours per week 40 µg/100 mL - blood (Lead) - no restriction	120 µg/100 mL RBC Erythropoietic protoporphyria - blood (Ethylenediaminetetraacetic acid) - not provided 30 µg/100 mL blood Lead - blood (Ethylenediaminetetraacetic acid) - not provided 3.8 million/µL Erythrocytes - blood (Ethylenediaminetetraacetic acid) - not provided 12 g/dL Hemoglobin - blood (Ethylenediaminetetraacetic acid) - not provided 35 % Hematocrit - blood (Ethylenediaminetetraacetic acid) - not provided 10 mg/L - urine (.delta.-Aminolevulinic acid) - not provided 3.2 million/µL Erythrocytes - blood (Ethylenediaminetetraacetic acid) - not provided 10 g/dL Hemoglobin - blood (Ethylenediaminetet	-	-	-

		raacetic acid) - not provided 30 % Hematocrit - blood (Ethylenediaminetetraacetic acid) - not provided 6 mg/L - urine (.delta.-Aminolevulinic acid) - not provided			
Cadmium 7440-43-9	-	2.5 µg/g Creatinine - urine (N-Acetylglucosaminidase) - not provided - () -	-	-	-
Arsenic oxide (As2O3) 1327-53-3	-	3.2 million/µL Erythrocytes - red and white blood count () - not provided 3.8 million/µL Erythrocytes - red and white blood count () - not provided 4000 Leukocytes/µL - red and white blood count () - not provided 13000 Leukocytes/µL - red and white blood count () - not provided 10 g/dL Hemoglobin - red and white blood count () - not provided 12 g/dL Hemoglobin - red and white blood count () - not provided 30 % Hematocrit - red and white blood count () - not provided 35 % Hematocrit - red and white blood count () - not provided 50 µg/L - urine () - after end of work day, at the end of a work week/end of the shift	-	-	-
Chemical name	Denmark	Finland	France	Germany	Germany
Mercury 7439-97-6	-	140 nmol/L - urine (Mercury) - in the morning after a working day at the end of a working week or exposure	0.015 mg/L - blood (Total inorganic Mercury) - end of shift at end of workweek 0.050 mg/g	25 µg/g Creatinine - urine (Mercury) - no restriction	25 µg/g Creatinine

		period 50 nmol/L - blood (Mercury, inorganic) - at the end of a working week; time of day does not matter	creatinine - urine (Total inorganic Mercury) - prior to shift		
Lead 7439-92-1	Lead 20 µg/100 mL blood	1.4 µmol/L - blood (Lead) - time of day does not matter	400 µg/L - blood (Lead) - 180 µg/L - blood (Lead) - indifferent sampling time 300 µg/L - blood (Lead) - 200 µg/L - blood (Lead) - 100 µg/L - blood (Lead) -	300 µg/L - whole blood (Lead) - no restriction 400 µg/L - whole blood (Lead) - no restriction	300 µg/L 400 µg/L
Cadmium 7440-43-9	-	20 nmol/L - urine (Cadmium) - at the end of a working week; time of day does not matter	0.005 mg/g creatinine - urine (Cadmium) - not critical 0.005 mg/L - blood (Cadmium) - not critical	-	-
Arsenic oxide (As2O3) 1327-53-3	-	-	0.05 mg/g creatinine - urine (Metabolites of inorganic Arsenic) - end of workweek	-	-

Chemical name	Hungary	Ireland	Italy	Italy REL
Mercury 7439-97-6	-	10 µg/L - blood (Mercury) - 30 µg/g Creatinine - urine (Mercury) -	-	-
Lead 7439-92-1	-	70 µg/100 mL - blood (Lead) - not critical 40 µg/100 mL - blood (Lead) - not critical 30 µg/100 mL - blood (Lead) - not critical	60 Pb µg/100 mL - blood () - end of workweek	-
Cadmium 7440-43-9	-	2 µg/g Creatinine - urine () - not critical	-	-
Arsenic oxide (As2O3) 1327-53-3	-	35 µg/L - urine (inorganic Arsenic plus methylated metabolites) - end of workweek	-	-

Chemical name	Slovenia	Spain	Switzerland	United Kingdom
Mercury 7439-97-6	-	30 10	25 15	20 µmol/mol creatinine - urine (Mercury) - random
Lead 7439-92-1	-	70	400 100	-
Cadmium 7440-43-9	-	2 5	5	-
Arsenic oxide (As2O3) 1327-53-3	-	-	50	-

Derived No Effect Level (DNEL) No information available.
Predicted No Effect Concentration (PNEC) No information available.

8.2. Exposure controls

Personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Hand protection	Wear suitable gloves.
Skin and body protection	Wear suitable protective clothing.
Respiratory protection	No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.
General hygiene considerations	Follow universal and standard precautions for handling potentially infectious materials.
Environmental exposure controls	No information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid
Appearance	powder or cake, lyophilised
Colour	red
Odour	Slight.
Odour threshold	No information available

Property	**Values**	**Remarks • Method**
Melting point / freezing point	No data available	None known
Boiling point / boiling range	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Flash point	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
pH	7.3-7.7	
pH (as aqueous solution)	No data available	No information available
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known
Water solubility	Soluble in water	
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Vapour pressure	No data available	None known
Relative density	No data available	None known
Bulk density	No data available	
Liquid Density	No data available	
Vapour density	No data available	None known
Particle characteristics		
Particle Size	No information available	
Particle Size Distribution	No information available	

9.2. Other information

9.2.1. Information with regard to physical hazard classes
Not applicable

9.2.2. Other safety characteristics
No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data
Sensitivity to mechanical impact None.
Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available.

Eye contact Specific test data for the substance or mixture is not available.

Skin contact Specific test data for the substance or mixture is not available.

Ingestion Specific test data for the substance or mixture is not available.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms No information available.

Acute toxicity

Numerical measures of toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Trade secret	= 29700 mg/kg (Rat)	-	-
Cadmium	= 1140 mg/kg (Rat)	-	= 25 mg/m³ (Rat) 30 min
Arsenic oxide (As2O3)	= 20 mg/kg (Rat)	-	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as mutagenic.

Chemical name	European Union
Cadmium	Muta. 2

Carcinogenicity No information available.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	European Union
Cadmium	Carc. 1B
Arsenic oxide (As2O3)	Carc. 1A

Reproductive toxicity No information available.

The table below indicates ingredients above the cut-off threshold considered as relevant which are listed as reproductive toxins.

Chemical name	European Union
Mercury	Repr. 1B
Lead	Repr. 1A Lact.
Cadmium	Repr. 2

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties No information available.

11.2.2. Other information

Other adverse effects No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Harmful to aquatic life with long lasting effects.

Unknown aquatic toxicity Contains 0 % of components with unknown hazards to the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Mercury	-	LC50: =0.16mg/L (96h, Cyprinus carpio) LC50: =0.18mg/L (96h, Cyprinus carpio) LC50: =0.5mg/L (96h, Cyprinus carpio) LC50: =0.9mg/L (96h, Oryzias latipes)	-	EC50: =5.0µg/L (96h, water flea)
Lead	-	LC50: =0.44mg/L (96h, Cyprinus carpio) LC50: =1.17mg/L (96h, Oncorhynchus mykiss) LC50: =1.32mg/L (96h, Oncorhynchus mykiss)	-	EC50: =600µg/L (48h, water flea)
Cadmium	-	LC50: 0.0004 - 0.003mg/L (96h, Pimephales promelas) LC50: =0.002mg/L (96h, Cyprinus carpio) LC50: =0.003mg/L (96h, Oncorhynchus mykiss) LC50: =0.006mg/L (96h, Oncorhynchus mykiss) LC50: =0.016mg/L (96h, Oryzias latipes) LC50: =0.24mg/L (96h, Cyprinus carpio) LC50: =21.1mg/L (96h, Lepomis macrochirus) LC50: =4.26mg/L (96h, Cyprinus carpio)	-	EC50: =0.0244mg/L (48h, Daphnia magna)
Arsenic oxide (As2O3)	-	LC50: 18.8 - 21.4mg/L (96h, Oncorhynchus mykiss) LC50: =135mg/L (96h, Pimephales promelas) LC50: >1000mg/L (96h, Oncorhynchus mykiss)	-	EC50: 3.9 - 4.5mg/L (24h, Daphnia magna) LC50: =0.96mg/L (96h, Daphnia magna)

12.2. Persistence and degradability

Persistence and degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation

Component Information

Chemical name	Partition coefficient
Arsenic oxide (As2O3)	18.1

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment

Chemical name	PBT and vPvB assessment
Trade secret	The substance is not PBT / vPvB
Lead	PBT assessment does not apply

Cadmium	PBT assessment does not apply
Arsenic oxide (As2O3)	PBT assessment does not apply

12.6. Endocrine disrupting properties

Endocrine disrupting properties No information available.

12.7. Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Do not reuse empty containers.

SECTION 14: Transport information

IATA

14.1 UN number or ID number Not regulated
14.2 UN proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazards Not applicable
14.6 Special Precautions for Users
Special Provisions None

IMDG

14.1 UN number or ID number Not regulated
14.2 UN proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazards Not applicable
14.6 Special Precautions for Users
Special Provisions None
14.7 Maritime transport in bulk according to IMO instruments No information available

RID

14.1 UN number Not regulated
14.2 UN proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazards Not applicable
14.6 Special Precautions for Users
Special Provisions None

ADR

14.1 UN number or ID number Not regulated
14.2 UN proper shipping name Not regulated
14.3 Transport hazard class(es) Not regulated
14.4 Packing group Not regulated
14.5 Environmental hazards Not applicable
14.6 Special Precautions for Users
Special Provisions None

SECTION 15: Regulatory information

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

National regulations

France
Occupational Illnesses (R-463-3, France)

Chemical name	French RG number	Title
Mercury 7439-97-6	RG 2	-
Lead 7439-92-1	RG 1	-
Cadmium 7440-43-9	RG 61,RG 61bis	-
Arsenic oxide (As2O3) 1327-53-3	RG 20,RG 20bis	-

Netherlands

Chemical name	Netherlands - List of Carcinogens	Netherlands - List of Mutagens	Netherlands - List of Reproductive Toxins
Mercury	-	-	Development (Category 1B)
Lead	-	-	Fertility (Category 1A); Development (Category 1A); Can be harmful via breastfeeding
Cadmium	-	-	Fertility (Category 2; stabilized, pyrophoric); Development (Category 2; stabilized, pyrophoric); Can be harmful via breastfeeding (stabilized, pyrophoric)

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorizations and/or restrictions on use:
This product contains one or more substance(s) subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV)
This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorization per REACH Annex XIV
Mercury - 7439-97-6	18[a]. 30.	-
Lead - 7439-92-1	72. 30. 63.	-
Cadmium - 7440-43-9	72. 23. 28.	-
Arsenic oxide (As2O3) - 1327-53-3	72. 28.	X

Persistent Organic Pollutants
Not applicable

Export Notification requirements

This product contains substances which are regulated pursuant to Regulation (EC) No. 649/2012 of the European parliament and of the council concerning the export and import of dangerous chemicals

Chemical name	European Export/Import Restrictions per (EC) 689/2008 - Annex Number
Mercury - 7439-97-6	V
Cadmium - 7440-43-9	I.1

Named dangerous substances per Seveso Directive (2012/18/EU)

Chemical name	Lower-tier requirements (tons)	Upper-tier requirements (tons)
Arsenic oxide (As2O3) - 1327-53-3	-	0.1

Ozone-depleting substances (ODS) regulation (EC) 1005/2009
Not applicable

International Inventories Contact supplier for inventory compliance status

15.2. Chemical safety assessment

Chemical Safety Report No information available

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3
H300 - Fatal if swallowed
H314 - Causes severe skin burns and eye damage
H319 - Causes serious eye irritation
H330 - Fatal if inhaled
H335 - May cause respiratory irritation
H341 - Suspected of causing genetic defects
H350 - May cause cancer
H360D - May damage the unborn child
H360FD - May damage fertility. May damage the unborn child
H361fd - Suspected of damaging fertility. Suspected of damaging the unborn child
H362 - May cause harm to breast-fed children
H372 - Causes damage to organs through prolonged or repeated exposure
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
H412 - Harmful to aquatic life with long lasting effects
H413 - May cause long lasting harmful effects to aquatic life

Legend
SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Acute oral toxicity	Calculation method
Acute dermal toxicity	Calculation method
Acute inhalation toxicity - gas	Calculation method
Acute inhalation toxicity - Vapour	Calculation method

Acute inhalation toxicity - dust/mist	Calculation method
Skin corrosion/irritation	Calculation method
Serious eye damage/eye irritation	Calculation method
Respiratory sensitisation	Calculation method
Skin sensitisation	Calculation method
Mutagenicity	Calculation method
Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA_RAC)
European Chemicals Agency (ECHA) (ECHA_API)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
National Institute of Technology and Evaluation (NITE)
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme
Organisation for Economic Co-operation and Development Screening Information Data Set
World Health Organization

Revision Note Significant changes throughout SDS. Review all sections

Revision date 18-Feb-2022

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006
Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet