

Safety Data Sheet
acc. to OSHA HCS

Printing date 07/27/2021

Reviewed on 07/27/2021

1 Identification

- **Product identifier**
- **Trade name:** Trace Metals on Filter Media
- **Article number:** QC-TMFM-C-SPIKED
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
High-Purity Standards
 7221 Investment Drive, North Charleston, SC 29418 United States
 Telephone: +1-843-767-7900
 Fax: +1-843-767-7906
 highpuritystandards.com
 Email: info@highpuritystandards.com
- **Information department:** Product safety department
- **Emergency telephone number:**
 INFOTRAC
 Emergency telephone numbers 1-800-535-5053
 Other emergency telephone numbers 1-352-323-3500

2 Hazard(s) identification

- **Classification of the substance or mixture**
 The product is not classified, according to the Globally Harmonized System (GHS).
- **Label elements**
- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**



- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

Safety Data Sheet
acc. to OSHA HCS

Printing date 07/27/2021

Reviewed on 07/27/2021

Trade name: Trace Metals on Filter Media

(Contd. of page 1)

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

9004-70-0	nitrocellulose,dry or wetted with less than 25% water(or alcohol), by mass	80-90%
7439-92-1	lead	0.13%

· **Chemical identification of the substance/preparation**

9004-35-7	Cellulose Acetate	0-10%
7440-22-4	silver	0.23%
7440-38-2	arsenic	0.23%
7440-66-6	zinc	0.23%
7439-89-6	iron	0.13%
7440-50-8	copper	0.13%
7439-96-5	manganese	0.06%
7440-02-0	nickel	0.06%
7440-28-0	thallium	0.06%
7440-39-3	barium	0.06%
7440-41-7	beryllium	0.06%
7440-43-9	cadmium	0.06%
7440-47-3	chromium	0.06%
7440-48-4	cobalt	0.06%
7440-62-2	vanadium	0.06%

4 First-aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

US

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Printing date 07/27/2021

Reviewed on 07/27/2021

Trade name: Trace Metals on Filter Media

(Contd. of page 2)

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:** Pick up mechanically.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

· **PAC-1:**

7440-22-4	silver	0.3 mg/m ³
7440-38-2	arsenic	1.5 mg/m ³
7440-66-6	zinc	6 mg/m ³
7439-89-6	iron	3.2 mg/m ³
7439-92-1	lead	0.15 mg/m ³
7440-50-8	copper	3 mg/m ³
7439-96-5	manganese	3 mg/m ³
7440-02-0	nickel	4.5 mg/m ³
7440-28-0	thallium	0.06 mg/m ³
7440-39-3	barium	1.5 mg/m ³
7440-41-7	beryllium	0.0023 mg/m ³
7440-43-9	cadmium	0.10 mg/m ³
7440-47-3	chromium	1.5 mg/m ³
7440-48-4	cobalt	0.18 mg/m ³
7440-62-2	vanadium	3 mg/m ³

· **PAC-2:**

7440-22-4	silver	170 mg/m ³
7440-38-2	arsenic	17 mg/m ³
7440-66-6	zinc	21 mg/m ³
7439-89-6	iron	35 mg/m ³
7439-92-1	lead	120 mg/m ³

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS

Printing date 07/27/2021

Reviewed on 07/27/2021

Trade name: Trace Metals on Filter Media

(Contd. of page 3)

7440-50-8	copper	33 mg/m ³
7439-96-5	manganese	5 mg/m ³
7440-02-0	nickel	50 mg/m ³
7440-28-0	thallium	3.3 mg/m ³
7440-39-3	barium	180 mg/m ³
7440-41-7	beryllium	0.025 mg/m ³
7440-43-9	cadmium	0.76 mg/m ³
7440-47-3	chromium	17 mg/m ³
7440-48-4	cobalt	2 mg/m ³
7440-62-2	vanadium	5.8 mg/m ³

PAC-3:

7440-22-4	silver	990 mg/m ³
7440-38-2	arsenic	100 mg/m ³
7440-66-6	zinc	120 mg/m ³
7439-89-6	iron	150 mg/m ³
7439-92-1	lead	700 mg/m ³
7440-50-8	copper	200 mg/m ³
7439-96-5	manganese	1,800 mg/m ³
7440-02-0	nickel	99 mg/m ³
7440-28-0	thallium	20 mg/m ³
7440-39-3	barium	1,100 mg/m ³
7440-41-7	beryllium	0.1 mg/m ³
7440-43-9	cadmium	4.7 mg/m ³
7440-47-3	chromium	99 mg/m ³
7440-48-4	cobalt	20 mg/m ³
7440-62-2	vanadium	35 mg/m ³

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special measures required.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.

(Contd. on page 5)

Safety Data Sheet
acc. to OSHA HCS

Printing date 07/27/2021

Reviewed on 07/27/2021

Trade name: Trace Metals on Filter Media

(Contd. of page 4)

· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

At this time, the remaining constituent has no known exposure limits.

7439-92-1 lead

PEL	Long-term value: 0.05* mg/m ³ *see 29 CFR 1910.1025
REL	Long-term value: 0.05* mg/m ³ *8-hr TWA ;See PocketGuide App.C
TLV	Long-term value: 0.05* mg/m ³ *and inorganic compounds, as Pb; BEI

· **Ingredients with biological limit values:**

7439-92-1 lead

BEI	30 µg/100 ml Medium: blood Time: not critical Parameter: Lead
	10 µg/100 ml Medium: blood Time: not critical Parameter: Lead (women of child bearing potential)

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

· **Breathing equipment:** Not required.

· **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

(Contd. on page 6)

Safety Data Sheet
acc. to OSHA HCS

Printing date 07/27/2021

Reviewed on 07/27/2021

Trade name: Trace Metals on Filter Media

(Contd. of page 5)

- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Not required.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

- **Form:** Solid
- **Color:** Whitish
- **Odor:** Characteristic
- **Odor threshold:** Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

- **Melting point/Melting range:** Undetermined.
- **Boiling point/Boiling range:** Undetermined.

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not determined.

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

- **Lower:** Not determined.
- **Upper:** Not determined.

· **Vapor pressure:** Not applicable.

- **Density:** Not determined.
- **Relative density** Not determined.
- **Vapor density** Not applicable.
- **Evaporation rate** Not applicable.

· **Solubility in / Miscibility with**

· **Water:** Insoluble.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

- **Dynamic:** Not applicable.
- **Kinematic:** Not applicable.

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Printing date 07/27/2021

Reviewed on 07/27/2021

Trade name: Trace Metals on Filter Media

(Contd. of page 6)

· Solvent content:	
· VOC content:	0.00 %
· Solids content:	81.6-91.6 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

7440-38-2 arsenic		
Oral	LD50	763 mg/kg (rat)
7440-43-9 cadmium		
Oral	LD50	225 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.

· **Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

· **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)		
7440-38-2	arsenic	I
7439-92-1	lead	2B
7440-02-0	nickel	2B
7440-41-7	beryllium	I

(Contd. on page 8)

Safety Data Sheet
acc. to OSHA HCS

Printing date 07/27/2021

Reviewed on 07/27/2021

Trade name: Trace Metals on Filter Media

(Contd. of page 7)

7440-43-9	cadmium	I
7440-47-3	chromium	3
7440-48-4	cobalt	2B
· NTP (National Toxicology Program)		
7440-38-2	arsenic	K
7439-92-1	lead	R
7440-02-0	nickel	R
7440-41-7	beryllium	K
7440-43-9	cadmium	K
7440-48-4	cobalt	R
· OSHA-Ca (Occupational Safety & Health Administration)		
7440-38-2	arsenic	
7440-43-9	cadmium	

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:** Smaller quantities can be disposed of with household waste.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

Safety Data Sheet
acc. to OSHA HCS

Printing date 07/27/2021

Reviewed on 07/27/2021

Trade name: Trace Metals on Filter Media

(Contd. of page 8)

14 Transport information

· UN-Number · DOT, ADR, IMDG, IATA	<i>not regulated</i>
· UN proper shipping name · DOT, ADR, IMDG, IATA	<i>not regulated</i>
· Transport hazard class(es) · DOT, ADR, ADN, IMDG, IATA · Class	<i>not regulated</i>
· Packing group · DOT, ADR, IMDG, IATA	<i>not regulated</i>
· Environmental hazards:	<i>Not applicable.</i>
· Special precautions for user	<i>Not applicable.</i>
· Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	<i>Not applicable.</i>
· UN "Model Regulation":	<i>not regulated</i>

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture	
· Sara	
· Section 355 (extremely hazardous substances):	
<i>None of the ingredients is listed.</i>	
· Section 313 (Specific toxic chemical listings):	
7440-22-4	<i>silver</i>
7440-38-2	<i>arsenic</i>
7440-66-6	<i>zinc</i>
7439-92-1	<i>lead</i>
7440-50-8	<i>copper</i>
7439-96-5	<i>manganese</i>
7440-02-0	<i>nickel</i>
7440-28-0	<i>thallium</i>
7440-39-3	<i>barium</i>
7440-41-7	<i>beryllium</i>
7440-43-9	<i>cadmium</i>
7440-47-3	<i>chromium</i>
7440-48-4	<i>cobalt</i>

(Contd. on page 10)

Safety Data Sheet
acc. to OSHA HCS

Printing date 07/27/2021

Reviewed on 07/27/2021

Trade name: Trace Metals on Filter Media

(Contd. of page 9)

7440-62-2	vanadium	
· TSCA (Toxic Substances Control Act):		
All components have the value ACTIVE.		
· Hazardous Air Pollutants		
7439-92-1	lead	
7439-96-5	manganese	
7440-48-4	cobalt	
· Proposition 65		
· Chemicals known to cause cancer:		
7440-38-2	arsenic	
7439-92-1	lead	
7440-02-0	nickel	
7440-41-7	beryllium	
7440-43-9	cadmium	
7440-48-4	cobalt	
· Chemicals known to cause reproductive toxicity for females:		
7439-92-1	lead	
· Chemicals known to cause reproductive toxicity for males:		
7439-92-1	lead	
7440-43-9	cadmium	
· Chemicals known to cause developmental toxicity:		
7439-92-1	lead	
7440-43-9	cadmium	
· Carcinogenic categories		
· EPA (Environmental Protection Agency)		
7440-22-4	silver	D
7440-38-2	arsenic	A
7440-66-6	zinc	D, I, II
7439-92-1	lead	B2
7440-50-8	copper	D
7439-96-5	manganese	D
7440-39-3	barium	D, CBD(inh), NL(oral)
7440-41-7	beryllium	B1, K/L(inh), CBD(oral)
7440-43-9	cadmium	B1
7440-47-3	chromium	D
· TLV (Threshold Limit Value established by ACGIH)		
7440-38-2	arsenic	AI

(Contd. on page 11)

Safety Data Sheet
acc. to OSHA HCS

Printing date 07/27/2021

Reviewed on 07/27/2021

Trade name: Trace Metals on Filter Media

(Contd. of page 10)

7439-92-1	lead	A3
7440-02-0	nickel	A5
7440-39-3	barium	A4
7440-41-7	beryllium	A1
7440-43-9	cadmium	A2
7440-47-3	chromium	A4
7440-48-4	cobalt	A3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

7440-38-2	arsenic	
7440-02-0	nickel	
7440-41-7	beryllium	
7440-43-9	cadmium	

- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Environment protection department.
- **Contact:**
High-Purity Standards
Tel: 843-767-7900
Fax: 843-767-7906
- **Date of preparation / last revision** 07/27/2021 / -
- **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health

(Contd. on page 12)



Safety Data Sheet
acc. to OSHA HCS

Printing date 07/27/2021

Reviewed on 07/27/2021

Trade name: Trace Metals on Filter Media

(Contd. of page 11)

TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
BEI: Biological Exposure Limit

US