

## Safety Data Sheet

acc. to OSHA HCS

Printing date 07/06/2022

Reviewed on 07/06/2022

### 1 Identification

- **Product identifier**
- **Trade name:** Trace Metals on Filter Media
- **Article number:** QC-TMFM-B-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](http://highpuritystandards.com)  
Email: [info@highpuritystandards.com](mailto: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)**

HEALTH	0	Health = *0
FIRE	0	Fire = 0
REACTIVITY	0	Reactivity = 0

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

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**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	≤90.0%
7440-38-2	arsenic	0.13%
7439-92-1	lead	0.06%

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

9004-35-7	Cellulose Acetate	≤10.0%
7440-66-6	zinc	0.13%
7439-89-6	iron	0.06%
7440-50-8	copper	0.06%
513-77-9	barium carbonate	0.023%
7439-96-5	manganese	0.023%
7440-02-0	nickel	0.023%
7440-28-0	thallium	0.023%
7440-43-9	cadmium	0.023%
7440-47-3	chromium	0.023%
7440-48-4	cobalt	0.023%
7803-55-6	Ammonium Vanadate	0.023%
19049-40-2	Beryllium acetate, basic	0.023%
7440-22-4	silver	0.013%

**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.

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**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:**

7440-38-2	arsenic	1.5 mg/m <sup>3</sup>
7440-66-6	zinc	6 mg/m <sup>3</sup>
7439-89-6	iron	3.2 mg/m <sup>3</sup>
7439-92-1	lead	0.15 mg/m <sup>3</sup>
7440-50-8	copper	3 mg/m <sup>3</sup>
513-77-9	barium carbonate	2.2 mg/m <sup>3</sup>
7439-96-5	manganese	3 mg/m <sup>3</sup>
7440-02-0	nickel	4.5 mg/m <sup>3</sup>
7440-28-0	thallium	0.06 mg/m <sup>3</sup>
7440-43-9	cadmium	0.10 mg/m <sup>3</sup>
7440-47-3	chromium	1.5 mg/m <sup>3</sup>
7440-48-4	cobalt	0.18 mg/m <sup>3</sup>
7803-55-6	Ammonium Vanadate	0.01 mg/m <sup>3</sup>
7440-22-4	silver	0.3 mg/m <sup>3</sup>

· **PAC-2:**

7440-38-2	arsenic	17 mg/m <sup>3</sup>
7440-66-6	zinc	21 mg/m <sup>3</sup>
7439-89-6	iron	35 mg/m <sup>3</sup>
7439-92-1	lead	120 mg/m <sup>3</sup>
7440-50-8	copper	33 mg/m <sup>3</sup>
513-77-9	barium carbonate	270 mg/m <sup>3</sup>

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7439-96-5	manganese	5 mg/m <sup>3</sup>
7440-02-0	nickel	50 mg/m <sup>3</sup>
7440-28-0	thallium	3.3 mg/m <sup>3</sup>
7440-43-9	cadmium	0.76 mg/m <sup>3</sup>
7440-47-3	chromium	17 mg/m <sup>3</sup>
7440-48-4	cobalt	2 mg/m <sup>3</sup>
7803-55-6	Ammonium Vanadate	0.11 mg/m <sup>3</sup>
7440-22-4	silver	170 mg/m <sup>3</sup>

**· PAC-3:**

7440-38-2	arsenic	100 mg/m <sup>3</sup>
7440-66-6	zinc	120 mg/m <sup>3</sup>
7439-89-6	iron	150 mg/m <sup>3</sup>
7439-92-1	lead	700 mg/m <sup>3</sup>
7440-50-8	copper	200 mg/m <sup>3</sup>
513-77-9	barium carbonate	1,600 mg/m <sup>3</sup>
7439-96-5	manganese	1,800 mg/m <sup>3</sup>
7440-02-0	nickel	99 mg/m <sup>3</sup>
7440-28-0	thallium	20 mg/m <sup>3</sup>
7440-43-9	cadmium	4.7 mg/m <sup>3</sup>
7440-47-3	chromium	99 mg/m <sup>3</sup>
7440-48-4	cobalt	20 mg/m <sup>3</sup>
7803-55-6	Ammonium Vanadate	80 mg/m <sup>3</sup>
7440-22-4	silver	990 mg/m <sup>3</sup>

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

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**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.

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

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

At this time, the other constituents have no known exposure limits.

**7440-38-2 arsenic**

PEL Long-term value: 0.5\* 0.01\*\* mg/m<sup>3</sup>  
as As; \*organic\*\*inorg. compds.; 29 CFR 1910.1018

REL Ceiling limit value: 0.002 mg/m<sup>3</sup>  
as As; 15min; See Pocket Guide App. A

TLV Long-term value: 0.01 mg/m<sup>3</sup>  
as As; BEI, A1

**7439-92-1 lead**

PEL Long-term value: 0.05\* mg/m<sup>3</sup>  
\*see 29 CFR 1910.1025

REL Long-term value: 0.05\* mg/m<sup>3</sup>  
\*8-hr TWA ;See PocketGuide App.C

TLV Long-term value: 0.05\* mg/m<sup>3</sup>  
\*and inorganic compds., as Pb; BEI, A3

· **Ingredients with biological limit values:**

**7440-38-2 arsenic**

BEI 35 µg As/L  
Medium: urine  
Time: end of workweek  
Parameter: Inorganic arsenic plus methylated metabolites (background)

**7439-92-1 lead**

BEI 200 µg/L  
Medium: blood  
Time: not critical  
Parameter: Lead

· **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.

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- **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.
- **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.

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· <b>Solubility in / Miscibility with Water:</b>	<i>Insoluble.</i>
· <b>Partition coefficient (n-octanol/water):</b>	<i>Not determined.</i>
· <b>Viscosity:</b>	
<b>Dynamic:</b>	<i>Not applicable.</i>
<b>Kinematic:</b>	<i>Not applicable.</i>
· <b>Solvent content:</b>	
<b>VOC content:</b>	<i>0.00 %</i>
<b>Solids content:</b>	<i>100.0 %</i>
· <b>Other information</b>	<i>No further relevant information available.</i>

**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:**

· <b>LD/LC50 values that are relevant for classification:</b>		
<b>7440-38-2 arsenic</b>		
Oral	LD50	763 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.*

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· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

7440-38-2	arsenic	I
7439-92-1	lead	2B
7440-02-0	nickel	2B
7440-43-9	cadmium	I
7440-47-3	chromium	3
7440-48-4	cobalt	2B
19049-40-2	Beryllium acetate, basic	I

· **NTP (National Toxicology Program)**

7440-38-2	arsenic	K
7439-92-1	lead	R
7440-02-0	nickel	R
7440-43-9	cadmium	K
7440-48-4	cobalt	R
19049-40-2	Beryllium acetate, basic	K

· **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 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

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**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.

**14 Transport information**

· <b>UN-Number</b>	
· <b>DOT, ADR, IMDG, IATA</b>	not regulated
· <b>UN proper shipping name</b>	
· <b>DOT, ADR, IMDG, IATA</b>	not regulated
· <b>Transport hazard class(es)</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	
· <b>Class</b>	not regulated
· <b>Packing group</b>	
· <b>DOT, ADR, IMDG, IATA</b>	not regulated
· <b>Environmental hazards:</b>	Not applicable.
· <b>Special precautions for user</b>	Not applicable.
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>UN "Model Regulation":</b>	not regulated

**15 Regulatory information**

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
No further relevant information available.
- **Sara**

· <b>Section 355 (extremely hazardous substances):</b>	
None of the ingredients is listed.	
· <b>Section 313 (Specific toxic chemical listings):</b>	
7440-38-2	arsenic
7440-66-6	zinc
7439-92-1	lead
7440-50-8	copper
513-77-9	barium carbonate

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7439-96-5	manganese
7440-02-0	nickel
7440-28-0	thallium
7440-43-9	cadmium
7440-47-3	chromium
7440-48-4	cobalt
7803-55-6	Ammonium Vanadate
19049-40-2	Beryllium acetate, basic
7440-22-4	silver

**· TSCA (Toxic Substances Control Act):**

9004-70-0	nitrocellulose, dry or wetted with less than 25% water (or alcohol), by mass	ACTIVE
9004-35-7	Cellulose Acetate	ACTIVE
7440-38-2	arsenic	ACTIVE
7440-66-6	zinc	ACTIVE
7439-89-6	iron	ACTIVE
7439-92-1	lead	ACTIVE
7440-50-8	copper	ACTIVE
513-77-9	barium carbonate	ACTIVE
7439-96-5	manganese	ACTIVE
7440-02-0	nickel	ACTIVE
7440-28-0	thallium	ACTIVE
7440-43-9	cadmium	ACTIVE
7440-47-3	chromium	ACTIVE
7440-48-4	cobalt	ACTIVE
7803-55-6	Ammonium Vanadate	ACTIVE
7440-22-4	silver	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
7440-43-9	cadmium
7440-48-4	cobalt

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19049-40-2	Beryllium acetate, basic
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**· Chemicals known to cause reproductive toxicity for females:**

7439-92-1	lead
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**· 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)**

7440-38-2	arsenic	A
7440-66-6	zinc	D, I, II
7439-92-1	lead	B2
7440-50-8	copper	D
513-77-9	barium carbonate	D, CBD(inh), NL(oral)
7439-96-5	manganese	D
7440-43-9	cadmium	B1
7440-47-3	chromium	D
7440-22-4	silver	D

**· TLV (Threshold Limit Value)**

7440-38-2	arsenic	A1
7439-92-1	lead	A3
513-77-9	barium carbonate	A4
7440-02-0	nickel	A5
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
7440-43-9	cadmium
19049-40-2	Beryllium acetate, basic

- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void

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· **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** 07/06/2022 / -

· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international 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

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

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEI: Biological Exposure Limit