

## Safety Data Sheet

acc. to OSHA HCS

Printing date 12/06/2018

Reviewed on 12/05/2018

### 1 Identification

- **Product identifier**
- **Trade name:** Trace Metals on Filter Media
- **Article number:** QC-TMFM-C
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
 High-Purity Standards  
 P.O. Box 41727  
 Charleston, SC 29423  
 Telephone: (843) 767-7900  
 FAX: (843) 767-7906
- **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.*

### 3 Composition/information on ingredients

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

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· <b>Dangerous components:</b>		
9004-70-0	nitrocellulose, dry or wetted with less than 25% water (or alcohol), by mass	80-90%
7439-92-1	lead	0.13%
· <b>Chemical identification of the substance/preparation</b>		
9004-35-7	Cellulose Acetate	0-10%
7440-22-4	silver	0.23%
7440-66-6	zinc	0.23%
7440-38-2	arsenic	0.23%
7440-50-8	copper	0.13%
7439-89-6	iron	0.13%
7440-48-4	cobalt	0.06%
7439-96-5	manganese	0.06%
7440-02-0	nickel	0.06%
7440-41-7	beryllium	0.06%
7440-28-0	thallium	0.06%
7440-62-2	vanadium	0.06%
7440-43-9	cadmium (non-pyrophoric)	0.06%
7440-47-3	chromium	0.06%
7440-39-3	barium	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.

#### 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.

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**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 <sup>3</sup>
7440-66-6	zinc	6 mg/m <sup>3</sup>
7440-38-2	arsenic	1.5 mg/m <sup>3</sup>
7440-50-8	copper	3 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>
7440-48-4	cobalt	0.18 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>
7440-41-7	beryllium	0.0023 mg/m <sup>3</sup>
7440-28-0	thallium	0.06 mg/m <sup>3</sup>
7440-62-2	vanadium	3 mg/m <sup>3</sup>
7440-43-9	cadmium (non-pyrophoric)	0.10 mg/m <sup>3</sup>
7440-47-3	chromium	1.5 mg/m <sup>3</sup>
7440-39-3	barium	1.5 mg/m <sup>3</sup>

· **PAC-2:**

7440-22-4	silver	170 mg/m <sup>3</sup>
7440-66-6	zinc	21 mg/m <sup>3</sup>
7440-38-2	arsenic	17 mg/m <sup>3</sup>
7440-50-8	copper	33 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>
7440-48-4	cobalt	2 mg/m <sup>3</sup>
7439-96-5	manganese	5 mg/m <sup>3</sup>
7440-02-0	nickel	50 mg/m <sup>3</sup>
7440-41-7	beryllium	0.025 mg/m <sup>3</sup>
7440-28-0	thallium	3.3 mg/m <sup>3</sup>
7440-62-2	vanadium	5.8 mg/m <sup>3</sup>
7440-43-9	cadmium (non-pyrophoric)	0.76 mg/m <sup>3</sup>
7440-47-3	chromium	17 mg/m <sup>3</sup>
7440-39-3	barium	180 mg/m <sup>3</sup>

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· <b>PAC-3:</b>		
7440-22-4	silver	990 mg/m <sup>3</sup>
7440-66-6	zinc	120 mg/m <sup>3</sup>
7440-38-2	arsenic	100 mg/m <sup>3</sup>
7440-50-8	copper	200 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>
7440-48-4	cobalt	20 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>
7440-41-7	beryllium	0.1 mg/m <sup>3</sup>
7440-28-0	thallium	20 mg/m <sup>3</sup>
7440-62-2	vanadium	35 mg/m <sup>3</sup>
7440-43-9	cadmium (non-pyrophoric)	4.7 mg/m <sup>3</sup>
7440-47-3	chromium	99 mg/m <sup>3</sup>
7440-39-3	barium	1,100 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.

## 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.  
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.  
At this time, the other constituents have no known exposure limits.

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**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 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.

· **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:**

<b>Form:</b>	Solid
<b>Color:</b>	Whitish
<b>Odor:</b>	Characteristic

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· <b>Odor threshold:</b>	Not determined.
· <b>pH-value:</b>	Not applicable.
· <b>Change in condition</b>	
<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	Undetermined.
· <b>Flash point:</b>	Not applicable.
· <b>Flammability (solid, gaseous):</b>	Not determined.
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
· <b>Vapor pressure:</b>	Not applicable.
· <b>Density:</b>	Not determined.
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with</b>	
<b>Water:</b>	Insoluble.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.
· <b>Solvent content:</b>	
<b>VOC content:</b>	0.00 % 0.0 g/l / 0.00 lb/gal
<b>Solids content:</b>	81.6-91.6 %
· <b>Other information</b>	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.

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**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)
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**7440-43-9 cadmium (non-pyrophoric)**

Oral	LD50	225 mg/kg (rat)
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- **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
7440-48-4	cobalt	2B
7440-02-0	nickel	2B
7440-41-7	beryllium	I
7440-43-9	cadmium (non-pyrophoric)	I
7440-47-3	chromium	3

· **NTP (National Toxicology Program)**

7440-38-2	arsenic	K
7439-92-1	lead	R
7440-48-4	cobalt	R
7440-02-0	nickel	R
7440-41-7	beryllium	K
7440-43-9	cadmium (non-pyrophoric)	K

· **OSHA-Ca (Occupational Safety & Health Administration)**

7440-38-2	arsenic
7440-43-9	cadmium (non-pyrophoric)

**12 Ecological information**

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability:** No further relevant information available.

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- **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.

**14 Transport information**

· <b>UN-Number</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	not regulated
· <b>UN proper shipping name</b>	
· <b>DOT, ADR, ADN, 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 MARPOL 73/78 and the IBC Code</b>	Not applicable.
· <b>UN "Model Regulation":</b>	not regulated

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**15 Regulatory information**

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

7440-22-4	silver
7440-66-6	zinc
7440-38-2	arsenic
7440-50-8	copper
7439-92-1	lead
7440-48-4	cobalt
7439-96-5	manganese
7440-02-0	nickel
7440-41-7	beryllium
7440-28-0	thallium
7440-62-2	vanadium
7440-43-9	cadmium (non-pyrophoric)
7440-47-3	chromium
7440-39-3	barium

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

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

7440-38-2	arsenic
7439-92-1	lead
7440-48-4	cobalt
7440-02-0	nickel
7440-41-7	beryllium
7440-43-9	cadmium (non-pyrophoric)

· **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 (non-pyrophoric)

· **Chemicals known to cause developmental toxicity:**

7439-92-1	lead
7440-43-9	cadmium (non-pyrophoric)

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- **Carcinogenic categories**

- **EPA (Environmental Protection Agency) (Substances not listed)**

9004-70-0	nitrocellulose, dry or wetted with less than 25% water (or alcohol), by mass
9004-35-7	Cellulose Acetate
7439-89-6	iron
7440-48-4	cobalt
7440-02-0	nickel
7440-28-0	thallium
7440-62-2	vanadium

- **TLV (Threshold Limit Value established by ACGIH)**

7440-38-2	arsenic	A1
7439-92-1	lead	A3
7440-48-4	cobalt	A3
7440-02-0	nickel	A5
7440-41-7	beryllium	A1
7440-43-9	cadmium (non-pyrophoric)	A2
7440-47-3	chromium	A4
7440-39-3	barium	A4

- **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 (non-pyrophoric)

- **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** 12/06/2018 / -

- **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

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

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