

## 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-E
- **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)**



- **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.*

(Contd. on page 2)

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 12/06/2018

Reviewed on 12/05/2018

**Trade name: Trace Metals on Filter Media**

(Contd. of page 1)

<b>· Dangerous components:</b>		
9004-70-0	nitrocellulose, dry or wetted with less than 25% water(or alcohol), by mass	80-90%
<b>· Chemical identification of the substance/preparation</b>		
9004-35-7	Cellulose Acetate	0-10%
7429-90-5	aluminium	0.26%
513-77-9	barium carbonate	0.13%
7440-38-2	arsenic	0.05%
7440-47-3	chromium	0.013%
7440-48-4	cobalt	0.013%
7440-50-8	copper	0.013%
7439-89-6	iron	0.013%
7439-92-1	lead	0.013%
7440-02-0	nickel	0.013%
7440-28-0	thallium	0.013%
7803-55-6	Ammonium Vanadate	0.013%
7440-66-6	zinc	0.013%
7440-22-4	silver	0.005%
7439-96-5	manganese	0.005%
7440-43-9	cadmium (non-pyrophoric)	0.005%
19049-40-2	Beryllium acetate, basic	0.0005%

#### 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.

US

(Contd. on page 3)

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 12/06/2018

Reviewed on 12/05/2018

**Trade name: Trace Metals on Filter Media**

(Contd. of page 2)

**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:**

513-77-9	barium carbonate	2.2 mg/m <sup>3</sup>
7440-38-2	arsenic	1.5 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>
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>
7440-02-0	nickel	4.5 mg/m <sup>3</sup>
7440-28-0	thallium	0.06 mg/m <sup>3</sup>
7803-55-6	Ammonium Vanadate	0.01 mg/m <sup>3</sup>
7440-66-6	zinc	6 mg/m <sup>3</sup>
7440-22-4	silver	0.3 mg/m <sup>3</sup>
7439-96-5	manganese	3 mg/m <sup>3</sup>
7440-43-9	cadmium (non-pyrophoric)	0.10 mg/m <sup>3</sup>

· **PAC-2:**

513-77-9	barium carbonate	270 mg/m <sup>3</sup>
7440-38-2	arsenic	17 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>
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>
7440-02-0	nickel	50 mg/m <sup>3</sup>
7440-28-0	thallium	3.3 mg/m <sup>3</sup>
7803-55-6	Ammonium Vanadate	0.11 mg/m <sup>3</sup>
7440-66-6	zinc	21 mg/m <sup>3</sup>
7440-22-4	silver	170 mg/m <sup>3</sup>
7439-96-5	manganese	5 mg/m <sup>3</sup>
7440-43-9	cadmium (non-pyrophoric)	0.76 mg/m <sup>3</sup>

· **PAC-3:**

513-77-9	barium carbonate	1,600 mg/m <sup>3</sup>
----------	------------------	-------------------------

(Contd. on page 4)

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 12/06/2018

Reviewed on 12/05/2018

**Trade name: Trace Metals on Filter Media**

		(Contd. of page 3)
7440-38-2	arsenic	100 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>
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>
7440-02-0	nickel	99 mg/m <sup>3</sup>
7440-28-0	thallium	20 mg/m <sup>3</sup>
7803-55-6	Ammonium Vanadate	80 mg/m <sup>3</sup>
7440-66-6	zinc	120 mg/m <sup>3</sup>
7440-22-4	silver	990 mg/m <sup>3</sup>
7439-96-5	manganese	1,800 mg/m <sup>3</sup>
7440-43-9	cadmium (non-pyrophoric)	4.7 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.  
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.
- **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.

(Contd. on page 5)

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 12/06/2018

Reviewed on 12/05/2018

**Trade name: Trace Metals on Filter Media**

(Contd. of page 4)

· **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
· <b>Odor threshold:</b>	Not determined.

· **pH-value:** Not applicable.

· **Change in condition**

· <b>Melting point/Melting range:</b>	Undetermined.
· <b>Boiling point/Boiling range:</b>	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:**

· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.

· **Vapor pressure:** 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.

· **Solubility in / Miscibility with**

· **Water:** Insoluble.

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

(Contd. on page 6)

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 12/06/2018

Reviewed on 12/05/2018

**Trade name: Trace Metals on Filter Media**

(Contd. of page 5)

· <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>	100.0 %
· <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.

**11 Toxicological information**

- **Information on toxicological effects**
- **Acute toxicity:**
- **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	1
7440-47-3	chromium	3
7440-48-4	cobalt	2B
7439-92-1	lead	2B
7440-02-0	nickel	2B
7440-43-9	cadmium (non-pyrophoric)	1
19049-40-2	Beryllium acetate, basic	1

· **NTP (National Toxicology Program)**

7440-38-2	arsenic	K
-----------	---------	---

(Contd. on page 7)

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 12/06/2018

Reviewed on 12/05/2018

**Trade name: Trace Metals on Filter Media**

(Contd. of page 6)

7440-48-4	cobalt	R
7439-92-1	lead	R
7440-02-0	nickel	R
7440-43-9	cadmium (non-pyrophoric)	K
19049-40-2	Beryllium acetate, basic	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.
- **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.

**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

(Contd. on page 8)

**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 12/06/2018

Reviewed on 12/05/2018

**Trade name: Trace Metals on Filter Media**

(Contd. of page 7)

· <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

**15 Regulatory information**

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

· <b>Section 355 (extremely hazardous substances):</b>
None of the ingredients is listed.

· <b>Section 313 (Specific toxic chemical listings):</b>
7429-90-5 aluminium
513-77-9 barium carbonate
7440-38-2 arsenic
7440-47-3 chromium
7440-48-4 cobalt
7440-50-8 copper
7439-92-1 lead
7440-02-0 nickel
7440-28-0 thallium
7803-55-6 Ammonium Vanadate
7440-66-6 zinc
7440-22-4 silver
7439-96-5 manganese
7440-43-9 cadmium (non-pyrophoric)
19049-40-2 Beryllium acetate, basic

· <b>TSCA (Toxic Substances Control Act):</b>
9004-70-0 nitrocellulose, dry or wetted with less than 25% water (or alcohol), by mass
9004-35-7 Cellulose Acetate
7429-90-5 aluminium
513-77-9 barium carbonate
7440-38-2 arsenic
7440-47-3 chromium
7440-48-4 cobalt
7440-50-8 copper

(Contd. on page 9)



**Safety Data Sheet**  
acc. to OSHA HCS

Printing date 12/06/2018

Reviewed on 12/05/2018

**Trade name: Trace Metals on Filter Media**

(Contd. of page 8)

7439-89-6	iron
7439-92-1	lead
7440-02-0	nickel
7440-28-0	thallium
7803-55-6	Ammonium Vanadate
7440-66-6	zinc
7440-22-4	silver
7439-96-5	manganese
7440-43-9	cadmium (non-pyrophoric)

**· Proposition 65**

**· Chemicals known to cause cancer:**

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

**· 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 (non-pyrophoric)

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

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

**· 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
7429-90-5	aluminium
7440-48-4	cobalt
7439-89-6	iron
7440-02-0	nickel
7440-28-0	thallium
7803-55-6	Ammonium Vanadate
19049-40-2	Beryllium acetate, basic

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

7429-90-5	aluminium	A4
513-77-9	barium carbonate	A4
7440-38-2	arsenic	A1

(Contd. on page 10)

## Safety Data Sheet

acc. to OSHA HCS

Printing date 12/06/2018

Reviewed on 12/05/2018

**Trade name: Trace Metals on Filter Media**

(Contd. of page 9)

7440-47-3	chromium	A4
7440-48-4	cobalt	A3
7439-92-1	lead	A3
7440-02-0	nickel	A5
7440-43-9	cadmium (non-pyrophoric)	A2

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

7440-38-2	arsenic	
7440-02-0	nickel	
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

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)

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