

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-B
- **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.*

(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)

· Dangerous components:		
9004-70-0	nitrocellulose, dry or wetted with less than 25% water(or alcohol), by mass	80-90%
· Chemical identification of the substance/preparation		
9004-35-7	Cellulose Acetate	0-10%
7440-66-6	zinc	0.13%
7440-38-2	arsenic	0.13%
7440-50-8	copper	0.06%
7439-89-6	iron	0.06%
7439-92-1	lead	0.06%
7440-48-4	cobalt	0.023%
7440-47-3	chromium	0.023%
7439-96-5	manganese	0.023%
7440-02-0	nickel	0.023%
7440-28-0	thallium	0.023%
7803-55-6	Ammonium Vanadate	0.023%
19049-40-2	Beryllium acetate, basic	0.023%
7440-43-9	cadmium (non-pyrophoric)	0.023%
513-77-9	barium carbonate	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.

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:**

7440-66-6	zinc	6 mg/m ³
7440-38-2	arsenic	1.5 mg/m ³
7440-50-8	copper	3 mg/m ³
7439-89-6	iron	3.2 mg/m ³
7439-92-1	lead	0.15 mg/m ³
7440-48-4	cobalt	0.18 mg/m ³
7440-47-3	chromium	1.5 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
7803-55-6	Ammonium Vanadate	0.01 mg/m ³
7440-43-9	cadmium (non-pyrophoric)	0.10 mg/m ³
513-77-9	barium carbonate	2.2 mg/m ³
7440-22-4	silver	0.3 mg/m ³

· **PAC-2:**

7440-66-6	zinc	21 mg/m ³
7440-38-2	arsenic	17 mg/m ³
7440-50-8	copper	33 mg/m ³
7439-89-6	iron	35 mg/m ³
7439-92-1	lead	120 mg/m ³
7440-48-4	cobalt	2 mg/m ³
7440-47-3	chromium	17 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
7803-55-6	Ammonium Vanadate	0.11 mg/m ³
7440-43-9	cadmium (non-pyrophoric)	0.76 mg/m ³
513-77-9	barium carbonate	270 mg/m ³
7440-22-4	silver	170 mg/m ³

· **PAC-3:**

7440-66-6	zinc	120 mg/m ³
-----------	------	-----------------------

(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 ³
7440-50-8	copper	200 mg/m ³
7439-89-6	iron	150 mg/m ³
7439-92-1	lead	700 mg/m ³
7440-48-4	cobalt	20 mg/m ³
7440-47-3	chromium	99 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
7803-55-6	Ammonium Vanadate	80 mg/m ³
7440-43-9	cadmium (non-pyrophoric)	4.7 mg/m ³
513-77-9	barium carbonate	1,600 mg/m ³
7440-22-4	silver	990 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.
- **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:**

· 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.

(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)

- **Viscosity:**
 - Dynamic:** Not applicable.
 - Kinematic:** Not applicable.
- **Solvent content:**
 - VOC content:** 0.00 %
0.0 g/l / 0.00 lb/gal
- **Solids content:** 100.0 %
- **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)
------	------	-----------------

- **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
7439-92-1	lead	2B
7440-48-4	cobalt	2B
7440-47-3	chromium	3
7440-02-0	nickel	2B
19049-40-2	Beryllium acetate, basic	1

(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)

7440-43-9	cadmium (non-pyrophoric)	I
· NTP (National Toxicology Program)		
7440-38-2	arsenic	K
7439-92-1	lead	R
7440-48-4	cobalt	R
7440-02-0	nickel	R
19049-40-2	Beryllium acetate, basic	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.
- **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

- **UN-Number**
- **DOT, ADR, ADN, IMDG, IATA** not regulated
- **UN proper shipping name**
- **DOT, ADR, ADN, IMDG, IATA** 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)

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

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):
7440-66-6 zinc
7440-38-2 arsenic
7440-50-8 copper
7439-92-1 lead
7440-48-4 cobalt
7440-47-3 chromium
7439-96-5 manganese
7440-02-0 nickel
7440-28-0 thallium
7803-55-6 Ammonium Vanadate
19049-40-2 Beryllium acetate, basic
7440-43-9 cadmium (non-pyrophoric)
513-77-9 barium carbonate
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
9004-35-7 Cellulose Acetate
7440-66-6 zinc
7440-38-2 arsenic
7440-50-8 copper
7439-89-6 iron

(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)

7439-92-1	lead
7440-48-4	cobalt
7440-47-3	chromium
7439-96-5	manganese
7440-02-0	nickel
7440-28-0	thallium
7803-55-6	Ammonium Vanadate
7440-43-9	cadmium (non-pyrophoric)
513-77-9	barium carbonate
7440-22-4	silver

· Proposition 65

· Chemicals known to cause cancer:

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

· 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
7439-89-6	iron
7440-48-4	cobalt
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)

7440-38-2	arsenic	A1
7439-92-1	lead	A3
7440-48-4	cobalt	A3

(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
7440-02-0	nickel	A5
7440-43-9	cadmium (non-pyrophoric)	A2
513-77-9	barium carbonate	A4

· 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)

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