

Safety Data Sheet

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

SECTION 1: Identification

Product identifier

| | |
|-------------------------|-----------------|
| Trade name/designation: | Cesium chloride |
| Product No.: | 4042 |
| Synonyms: | none |

Relevant identified uses of the substance or mixture and uses advised against

| | |
|-----------------------------|------------------------------------------------|
| Recommended use | For Laboratory, Research or Manufacturing Use. |
| Uses advised against | Not determined. |

Details of the supplier of the safety data sheet

Supplier

Avantor Performance Materials, LLC.

| | |
|------------------|---------------------------------|
| Street | 100 Matsonford Rd, Suite 200 |
| Postal code/City | Radnor, PA 19087, United States |
| Telephone | +1-855-282-6867 |
| Telefax | +1-610-573-2610 |

Emergency phone number

| | |
|-----------|---------------------------------------------------------------------|
| Telephone | +1-800-424-9300 (Chemtrec, 24 hrs/day, 7 days/week, USA and Canada) |
|-----------|---------------------------------------------------------------------|

Preparation Information

Product Information Compliance

| | |
|--------|-------------------------|
| E-mail | SDS@avantorsciences.com |
|--------|-------------------------|

SECTION 2: Hazard identification

Classification of the substance or mixture

Label elements

Health hazards

Reproductive toxicity, category 2

Hazard pictograms



Signal word: Warning

Hazard statements

H361 - Suspected of damaging fertility or the unborn child.

Precautionary statements

Prevention:

P201 - Obtain special instructions before use.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P202 - Do not handle until all safety precautions have been read and understood.

Response:

P308+P313 - IF exposed or concerned: Get medical advice/attention.

Storage:

P405 - Store locked up.

Disposal:

P501 - Dispose of contents/container to ...

Hazard(s) not otherwise classified (HNOC)

none

SECTION 3: Composition/information on ingredients

Substances

| | |
|-------------------|-----------------|
| Substance name | Cesium chloride |
| Molecular formula | CsCl |
| Molecular weight | 168.36 g/mol |
| CAS No. | 7647-17-8 |

SECTION 4: First aid measures

General information

When in doubt or if symptoms are observed, get medical advice. Change contaminated, saturated clothing. Wash contaminated clothing before reuse. Do not leave affected person unattended.

In case of inhalation

Remove casualty to fresh air and keep warm and at rest. Obtain medical attention if symptoms appear.

In case of skin contact

Gently wash with plenty of soap and water. In case of skin reactions, consult a physician.

After eye contact:

Rinse immediately carefully and thoroughly with eye-bath or water. Obtain medical attention if symptoms appear.

In case of ingestion

Rinse mouth thoroughly with water. Call a doctor if you feel unwell.

Most important symptoms/effects, acute and delayed

No known symptoms to date.

Indication of any immediate medical attention and special treatment needed

No special information on medical attention and special treatment available.

SECTION 5: Fire fighting measures

Extinguishing media

Suitable extinguishing media

ABC-powder
Carbon dioxide (CO₂).
Dry sand
Nitrogen

Extinguishing media which must not be used for safety reasons

Water spray.
Full water jet

Specific hazards arising from the chemical

The product itself does not burn.
Fire may produce irritating, corrosive and/or toxic gases.
In case of fire may be liberated:
Hydrogen chloride (HCl)

Advice for firefighters

In case of fire and/or explosion do not breathe fumes.
Protective equipment and precautions for firefighters:
Wear a self-contained breathing apparatus and chemical protective clothing.
Co-ordinate fire-fighting measures to the fire surroundings.
In case of fire: Evacuate area.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Remove victim out of the danger area. First Aid, decontamination, treatment of symptoms.

Environmental precautions

No special environmental measures are necessary.

Methods and material for containment and cleaning up

Take up mechanically, placing in appropriate containers for disposal. Dispose according to legislation.

Additional information

Personal protection equipment (PPE): see section 8 Disposal information: see section 13

SECTION 7: Handling and storage**Precautions for safe handling**

Advices on safe handling

No special measures are necessary.

Measures to prevent fire, aerosol and dust generation

No special measures are necessary.

Measures required to protect the environment

No special measures are necessary.

Wash hands before breaks and after work. Avoid contact with eyes and skin. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

Conditions for safe storage, including any incompatibilities

Recommended storage temperature: Ambient temperature

Storage: Keep container tightly closed and in a well-ventilated place. Keep/Store only in original container.

Protect from moisture. Packaging materials: Glass Polyethylene PP (Polypropylene) Unsuitable material for taking up: Metal container

SECTION 8: Exposure controls/personal protection**Control parameters**

Does not contain substances above concentration limits fixing an occupational exposure limit.

Engineering controls**Appropriate engineering controls**

Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

Personal protection equipment (PPE)

Wear suitable protective clothing. When handling with chemical substances, protective clothing must be worn.

Eye/face protection

Eye glasses with side protection

Skin protection

Wear suitable gloves. When handling with chemical substances, protective gloves must be worn. In the case of wanting to use the gloves again, clean them before taking off and air them well. Check leak tightness/impermeability prior to use.

By short-term hand contact

| | |
|----------------------------------|----------------------|
| Suitable material: | NBR (Nitrile rubber) |
| Thickness of the glove material: | 0,12 mm |
| Breakthrough time | > 480 min |

By long-term hand contact

| | |
|----------------------------------|----------------------|
| Suitable material: | NBR (Nitrile rubber) |
| Thickness of the glove material: | 0,38 mm |
| Breakthrough time | > 480 min |

Respiratory protection

Usually no personal respirative protection necessary.

Additional information

Wash hands before breaks and after work. Avoid contact with eyes and skin. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

Environmental exposure controls

no data available

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

| | |
|---------------------|-------------------|
| (a) Appearance | |
| Physical state: | solid |
| Color: | white |
| (b) Odor: | no data available |
| (c) Odor threshold: | no data available |

Safety relevant basic data

| | |
|----------------------------------------------|---------------------------------------|
| (d) pH: | 7-9 (50 g/l; H ₂ O; 20 °C) |
| (e) Melting point/freezing point: | 646 °C |
| (f) Initial boiling point and boiling range: | 1303 °C (1013 hPa) |
| (g) Flash point: | no data available |
| (h) Evaporation rate: | no data available |
| (i) Flammability (solid, gas): | not applicable |
| (j) Flammability or explosive limits | |
| Lower explosion limit: | no data available |
| Upper explosion limit: | no data available |
| (k) Vapor pressure: | no data available |
| (l) Vapor density: | no data available |
| (m) Density: | 3.7808 g/cm ³ (20 °C) |
| (n) Solubility(ies) | |
| Water solubility: | 1,860 g/l (20 °C) |
| Soluble (g/L) in Ethanol: | no data available |
| (o) Partition coefficient: n-octanol/water: | no data available |
| (p) Auto-ignition temperature: | no data available |
| (q) Decomposition temperature: | not applicable |
| (r) Viscosity | |
| Kinematic viscosity: | no data available |
| Dynamic viscosity: | no data available |
| (s) Explosive properties: | not applicable |
| (t) Oxidising properties: | not applicable |

Other information

| | |
|------------------------|-------------------|
| Bulk density: | no data available |
| Refraction index: | no data available |
| Dissociation constant: | no data available |
| Surface tension: | no data available |
| Henry's Law Constant: | no data available |

SECTION 10: Stability and reactivity**Reactivity**

This material is non-reactive under normal conditions.

Chemical stability

The product is chemically stable under standard ambient conditions (room temperature).

Possibility of hazardous reactions

No further relevant information available.

Conditions to avoid

No further relevant information available.

Incompatible materials:

No further relevant information available.

Hazardous decomposition products

No known hazardous decomposition products.
Decomposition products in case of fire: see section 5.

SECTION 11: Toxicological information**Information on toxicological effects****Acute effects**

Acute oral toxicity:

LD50: > 2004 mg/kg - Rat - (Merck KGaA)

Acute dermal toxicity:

no data available

Acute inhalation toxicity:

no data available

Irritant and corrosive effects:

Primary irritation to the skin:

not applicable

Irritation to eyes:

not applicable

Irritation to respiratory tract:

not applicable

Respiratory or skin sensitization

In case of skin contact: not sensitizing

In case of inhalation: not sensitizing

STOT-single exposure

not applicable

STOT-repeated exposure

not applicable

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**Carcinogenicity**

No indication of human carcinogenicity.

Germ cell mutagenicity

No indications of human germ cell mutagenicity exist.

Reproductive toxicity

Suspected of damaging fertility or the unborn child.

Aspiration hazard

not applicable

Other adverse effects

no data available

SECTION 12: Ecological information**Ecotoxicity****Fish toxicity:**

no data available

Daphnia toxicity:

no data available

Algae toxicity:

no data available

Bacteria toxicity:

no data available

Persistence and degradability

no data available

Bioaccumulative potential

Partition coefficient: n-octanol/water: no data available

Mobility in soil:

no data available

Other adverse effects

no data available

SECTION 13: Disposal considerations

Waste treatment methods

Appropriate disposal / Product

Dispose according to legislation. Consult the appropriate local waste disposal expert about waste disposal. Waste requires monitoring.

Appropriate disposal / Package

Dispose according to legislation. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (DOT)

No dangerous good in sense of this transport regulation.

Sea transport (IMDG)

No dangerous good in sense of this transport regulation.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code not relevant

Air transport (ICAO-TI / IATA-DGR)

No dangerous good in sense of this transport regulation.

SECTION 15: Regulatory information

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

National regulations

Toxic Substances Control Act (TSCA)

Listed

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

SARA 313 Components

Not listed.

US State Regulations

Massachusetts Right To Know Components

Not listed.

Pennsylvania Right To Know Components

Not listed.

New Jersey Right To Know Components

Not listed.

California Prop. 65 Components

Not listed.

SECTION 16: Other information

Abbreviations and acronyms

ACGIH - American Conference of Governmental Industrial Hygienists
DOT - Department of Transportation
IARC - International Agency for Research on Cancer
IATA-DGR - International Air Transport Association-Dangerous Goods Regulations
ICAO-TI - International Civil Aviation Organization-Technical Instructions
IMDG - International Maritime Code for Dangerous Goods
LTV - Long Term Value
NIOSH - National Institute for Occupational Safety and Health
NTP - National Toxicology Program
OSHA - Occupational Safety & Health Administration
PBT - Persistent, Bioaccumulative and Toxic
PEL - Permissible Exposure Limit
STV - Short Term Value
SVHC - Substances of Very High Concern
TDG - Transport of Dangerous Goods
TLV - Threshold Limit Value
vPvB - very Persistent, very Bioaccumulative

Key literature references and sources for data

This Safety Data Sheet has been prepared based on information available for public as TOXNET information, European Chemicals Agency (ECHA) substance dossier, papers from international cancer research institutes (IARC Monographs), U.S. National Toxicology Program data, U.S. Agency for Toxic Substances and Disease Control (ATSDR), PubChem websites and SDS from our raw material manufacturers.

| Revision date | Version | Print date |
|---------------|---------|------------|
| 09.05.2023 | 1.1 | 2023-05-09 |

Additional information

Indication of changes:

general update

If you need an explanation of the change, contact the supplier (SDS@avantorsciences.com).

Disclaimer

The information provided in this Safety Data Sheet (SDS) was prepared based on data believed to be accurate as of the date of this SDS. TO THE GREATEST EXTENT PERMITTED BY LAW, AVANTOR PERFORMANCE MATERIALS ("AVANTOR") EXPRESSLY DISCLAIMS ANY AND ALL REPRESENTATIONS AND WARRANTIES REGARDING THE INFORMATION CONTAINED HEREIN INCLUDING, WITHOUT LIMITATION, AS TO ACCURACY, COMPLETENESS, FITNESS FOR PURPOSE OR USE, MERCHANTABILITY, NON-INFRINGEMENT, PERFORMANCE, SAFETY, SUITABILITY AND STABILITY. This SDS is intended as a guide to the appropriate use, handling, storage and disposal of the product to which it relates by properly trained personnel, and is not intended to be comprehensive. Users of Avantor's products are advised to perform their own tests and to exercise their own judgment to determine the safety, suitability and appropriate use, handling, storage and disposal of each product and product combination for their own purposes and uses. TO THE GREATEST EXTENT PERMITTED BY LAW, AVANTOR DISCLAIMS LIABILITY FOR, AND BY USING AVANTOR'S PRODUCTS PURCHASER AGREES THAT UNDER NO

CIRCUMSTANCES SHALL AVANTOR BE LIABLE FOR, SPECIAL, INDIRECT, INCIDENTAL , PUNITIVE OR CONSEQUENTIAL DAMAGES OF ANY TYPE OR KIND, INCLUDING WITHOUT LIMITATION, FOR LOSS OF PROFITS, REPUTATIONAL DAMAGE, PRODUCT RECALL OR BUSINESS INTERRUPTION.