SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name: Cesium chloride
Product Number: 289329
Brand: SIGALD
CAS-No.: 7647-17-8

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

Identified uses: Laboratory chemicals, Synthesis of substances

1.3 Details of the supplier of the safety data sheet

Company: Sigma-Aldrich Inc.
3050 SPRUCE ST
ST. LOUIS MO 63103
UNITED STATES
Telephone: +1 314 771-5765
Fax: +1 800 325-5052

1.4 Emergency telephone

Emergency Phone #: 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Reproductive toxicity (Category 2), H361
Short-term (acute) aquatic hazard (Category 3), H402

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram

Signal word: Warning
Hazard statement(s)
H361 Suspected of damaging fertility or the unborn child.
H402 Harmful to aquatic life.

SIGALD - 289329
Precautionary statement(s)
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P405 Store locked up.
P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

SECTION 3: Composition/information on ingredients

3.1 Substances

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cesium chloride</td>
<td>Repr. 2; Aquatic Acute 3; H361, H402</td>
<td>&lt;= 100%</td>
</tr>
</tbody>
</table>

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice
Show this material safety data sheet to the doctor in attendance.

If inhaled
After inhalation: fresh air. Call in physician.

In case of skin contact
In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

In case of eye contact
After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

If swallowed
After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11
4.3 Indication of any immediate medical attention and special treatment needed
No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the
surrounding environment.

Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture
氢氯化氢
铯/铯氧化物
不燃。
对化学品/混合物的燃烧可能释放危险的蒸气。

5.3 Advice for firefighters
居于危险区域的人员须使用自给式呼吸器。防止皮肤接触，通过保持安全距离或穿戴合适防护服。

5.4 Further information
抑制（扑灭）气体/蒸汽/雾与水喷雾。防止火灭火用水污染地表水或地下水系统。

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
非紧急人员的建议：避免吸入灰尘。避免接触物质。确保通风良好。撤离危险区域，观察紧急程序，科找专家。
对于个人防护，请参阅第8节。

6.2 Environmental precautions
不要让产品流入排水系统。

6.3 Methods and materials for containment and cleaning up
堵塞下水道。收集，捆扎，泵出泄漏。观察可能的材料限制（参阅第7节和10节）。收集干燥。妥善处置。清理受影响区域。避免产生灰尘。

6.4 Reference to other sections
对于废弃物，请参阅第13节。

SECTION 7: Handling and storage

7.1 Precautions for safe handling
对于预防措施，请参阅第2.2节。

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

SIGALD - 289329
Tightly closed. Dry. Keep locked up or in an area accessible only to qualified or authorized persons.

Hygroscopic.

**Storage class**
Storage class (TRGS 510): 13: Non Combustible Solids

**7.3 Specific end use(s)**
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

**Ingredients with workplace control parameters**
Contains no substances with occupational exposure limit values.

#### 8.2 Exposure controls

**Appropriate engineering controls**
Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

**Personal protective equipment**

**Eye/face protection**
Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

**Skin protection**
This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

- **Full contact**
  - Material: Nitrile rubber
  - Minimum layer thickness: 0.11 mm
  - Break through time: 480 min
  - Material tested: KCL 741 Dermatril® L

- **Splash contact**
  - Material: Nitrile rubber
  - Minimum layer thickness: 0.11 mm
  - Break through time: 480 min
  - Material tested: KCL 741 Dermatril® L

**Body Protection**
protective clothing

**Respiratory protection**
required when dusts are generated.
Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Control of environmental exposure
Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance Form: crystalline
   Color: white

b) Odor odorless

c) Odor Threshold No data available

d) pH 6.0 - 7.5

e) Melting point/freezing point Melting point/range: 645 °C (1193 °F) - lit.

f) Initial boiling point and boiling range No data available

g) Flash point ()Not applicable

h) Evaporation rate No data available

i) Flammability (solid, gas) The product is not flammable.

j) Upper/lower flammability or explosive limits No data available

k) Vapor pressure No data available

l) Vapor density No data available

m) Density 3.97 g/cm³ at 20 °C (68 °F) - OECD Test Guideline 109
   Relative density No data available

n) Water solubility 1,000 g/l at 20 °C (68 °F) - OECD Test Guideline 105 - completely soluble

o) Partition coefficient: n-octanol/water Not applicable for inorganic substances


q) Decomposition temperature No data available

r) Viscosity No data available

s) Explosive properties No data available

t) Oxidizing properties none

9.2 Other safety information

Surface tension 72.8 mN/m at 20 °C (68 °F) - OECD Test Guideline 115
SECTION 10: Stability and reactivity

10.1 Reactivity
No data available

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

10.3 Possibility of hazardous reactions
Violent reactions possible with:
Alkali metals

10.4 Conditions to avoid
Avoid moisture.
no information available

10.5 Incompatible materials
No data available

10.6 Hazardous decomposition products
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - 2,600 mg/kg
Remarks: (RTECS)
Inhalation: No data available
Dermal: No data available
No data available

Skin corrosion/irritation
Skin - reconstructed human epidermis (RhE)
Result: No irritation - 15 min
(OECD Test Guideline 439)

Serious eye damage/eye irritation
Eyes - Rabbit
Result: No eye irritation
(OECD Test Guideline 405)
Remarks: (in analogy to similar products)

Respiratory or skin sensitization
Local lymph node assay (LLNA) - Mouse
Result: negative
(OECD Test Guideline 429)
Remarks: (in analogy to similar products)
The value is given in analogy to the following substances: cesium nitrate

Germ cell mutagenicity
Test Type: Ames test
Test system: Escherichia coli/Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative

Test Type: Micronucleus test
Species: Mouse
Cell type: Bone marrow
Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: negative

**Carcinogenicity**
IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA’s list of regulated carcinogens.

**Reproductive toxicity**
Suspected of damaging fertility.

**Specific target organ toxicity - single exposure**
No data available

**Specific target organ toxicity - repeated exposure**
No data available

**Aspiration hazard**
No data available

**11.2 Additional Information**
RTECS: FK9625000
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
Stomach - Irregularities - Based on Human Evidence

**SECTION 12: Ecological information**

**12.1 Toxicity**
Toxicity to daphnia and other aquatic invertebrates
static test EC50 - Daphnia magna (Water flea) - 37.4 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to bacteria
static test EC50 - activated sludge - > 1,000 mg/l - 3 h (OECD Test Guideline 209)
Remarks: (in analogy to similar products)

**12.2 Persistence and degradability**
Not applicable for inorganic substances

**12.3 Bioaccumulative potential**
No data available
12.4 Mobility in soil  
No data available

12.5 Results of PBT and vPvB assessment  
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Endocrine disrupting properties  
No data available

12.7 Other adverse effects  
No data available

SECTION 13: Disposal considerations
13.1 Waste treatment methods  
Product  
Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself. See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14: Transport information  
DOT (US)  
Not dangerous goods

IMDG  
Not dangerous goods

IATA  
Not dangerous goods

Further information  
Not classified as dangerous in the meaning of transport regulations.

SECTION 15: Regulatory information  
SARA 302 Components  
This material does not contain any components with a section 302 EHS TPQ.

SARA 313 Components  
This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards  
Chronic Health Hazard

Massachusetts Right To Know Components  
No components are subject to the Massachusetts Right to Know Act.
SECTION 16: Other information

Further information
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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