SAFETY DATA SHEET
Silver hexafluoroantimonate(V)

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

1.1. Product identifier

Product name  Silver hexafluoroantimonate(V)
Product number  FS59850
CAS number  26042-64-8
EC number  247-429-1

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

Identified uses  Laboratory reagent. Manufacture of substances. Research and development.

1.3. Details of the supplier of the safety data sheet

Supplier  Carbosynth Ltd
8&9 Old Station Business Park
Compton
Berkshire
RG20 6NE
UK
+44 1635 578444
+44 1635 579444
info@carbosynth.com

1.4. Emergency telephone number

Emergency telephone  +44 7887 998634

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards  Not Classified
Health hazards  Acute Tox. 4 - H302 Acute Tox. 4 - H312 Acute Tox. 4 - H332 Skin Corr. 1B - H314 Eye Dam. 1 - H318
Environmental hazards  Aquatic Chronic 2 - H411

2.2. Label elements

EC number  247-429-1

Pictogram

Signal word  Danger
Silver hexafluoroantimonate(V)

Hazard statements
H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.
H314 Causes severe skin burns and eye damage.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301+P312 IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell.
P302+P352 IF ON SKIN: Wash with plenty of water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P501 Dispose of contents/ container in accordance with national regulations.

2.3. Other hazards
No data available.

SECTION 3: Composition/information on ingredients

3.1. Substances

<table>
<thead>
<tr>
<th>Product name</th>
<th>Silver hexafluoroantimonate(V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number</td>
<td>26042-64-8</td>
</tr>
<tr>
<td>EC number</td>
<td>247-429-1</td>
</tr>
<tr>
<td>Chemical formula</td>
<td>AgSbF₆</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

4.1. Description of first aid measures

General information Get medical advice/attention if you feel unwell.

Inhalation Remove person to fresh air and keep comfortable for breathing. If breathing stops, provide artificial respiration. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention if symptoms are severe or persist.

Ingestion Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention if symptoms are severe or persist.

Skin contact Remove contaminated clothing. Rinse with water. Continue to rinse for at least 15 minutes. Wash contaminated clothing before reuse. Get medical attention if symptoms are severe or persist.

Eye contact Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes. Get medical attention if symptoms are severe or persist.

4.2. Most important symptoms and effects, both acute and delayed

General information See Section 11 for additional information on health hazards.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture
Silver hexafluoroantimonate(V)

<table>
<thead>
<tr>
<th>Specific hazards</th>
<th>None known.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazardous combustion products</td>
<td>Thermal decomposition or combustion products may include the following substances: Hydrogen fluoride (HF). Metal oxide(s).</td>
</tr>
</tbody>
</table>

5.3. Advice for firefighters

| Special protective equipment for firefighters | Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents. Use protective equipment appropriate for surrounding materials. |

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

| Personal precautions | Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into spilled material. Avoid inhalation of dust and vapours. Provide adequate ventilation. Keep unnecessary and unprotected personnel away from the spillage. |

6.2. Environmental precautions

| Environmental precautions | Avoid discharge into drains or watercourses or onto the ground. |

6.3. Methods and material for containment and cleaning up

| Methods for cleaning up | Wear protective clothing as described in Section 8 of this safety data sheet. Collect powder using special dust vacuum cleaner with particle filter or carefully sweep into suitable waste disposal containers and seal securely. Clear up spills immediately and dispose of waste safely. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. For waste disposal, see Section 13. |

6.4. Reference to other sections

| Reference to other sections | For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13. |

SECTION 7: Handling and storage

7.1. Precautions for safe handling

| Usage precautions | Wear protective clothing as described in Section 8 of this safety data sheet. Wash hands thoroughly after handling. Provide adequate ventilation. Avoid generation and spreading of dust. Avoid contact with skin and eyes. Avoid inhalation of dust and vapours. |

7.2. Conditions for safe storage, including any incompatibilities


7.3. Specific end use(s)

| Specific end use(s) | The identified uses for this product are detailed in Section 1.2. |

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

| Occupational exposure limits | Long-term exposure limit (8-hour TWA): WEL 0.5 mg/m³ dust. Short-term exposure limit (15-minute): 1.5 mg/m³ dust. WEL = Workplace Exposure Limit |
Silver hexafluoroantimonate(V)

8.2. Exposure controls

Appropriate engineering controls
Provide adequate ventilation. Observe any occupational exposure limits for the product or ingredients.

Eye/face protection
Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection
Wear protective gloves. To protect hands from chemicals, gloves should comply with European Standard EN374.

Other skin and body protection
Wear appropriate clothing to prevent repeated or prolonged skin contact.

Respiratory protection
Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is ‘CE’-marked. Particulate filters should comply with European Standard EN143. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140.

Environmental exposure controls
Keep container tightly sealed when not in use.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance
Solid.

Colour
White/off-white.

Odour
No data available.

Odour threshold
No data available.

pH
No data available.

Melting point
No data available.

Initial boiling point and range
No data available.

Flash point
No data available.

Evaporation rate
No data available.

Flammability (solid, gas)
No data available.

Upper/lower flammability or explosive limits
No data available.

Vapour pressure
No data available.

Vapour density
No data available.

Relative density
No data available.

Solubility(ies)
Soluble in water.

Partition coefficient
No data available.

Auto-ignition temperature
No data available.

Decomposition Temperature
No data available.

Viscosity
No data available.
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Explosive properties
No data available.

Oxidising properties
No data available.

9.2. Other information
Molecular weight
343.62

SECTION 10: Stability and reactivity

10.1. Reactivity
Reactivity
No data available.

10.2. Chemical stability
Stability
Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions
Possibility of hazardous reactions
No data available.

10.4. Conditions to avoid
Conditions to avoid

10.5. Incompatible materials
Materials to avoid
Strong oxidising agents. Strong acids.

10.6. Hazardous decomposition products
Hazardous decomposition products
Hydrogen fluoride (HF). Metal oxide(s).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral
Notes (oral LD₅₀)
Acute Tox. 4 - H302 Harmful if swallowed.
ATE oral (mg/kg)
500.0

Acute toxicity - dermal
Notes (dermal LD₅₀)
Acute Tox. 4 - H312 Harmful in contact with skin.
ATE dermal (mg/kg)
1,100.0

Acute toxicity - inhalation
Notes (inhalation LC₅₀)
Acute Tox. 4 - H332 Harmful if inhaled.
ATE inhalation (dusts/mists mg/l)
1.5

Skin corrosion/irritation
Animal data
Skin Corr. 1B - H314 Causes severe burns.

Serious eye damage/irritation
Eye Dam. 1 - H318 Corrosive to skin. Corrosivity to eyes is assumed.

Respiratory sensitisation
Respiratory sensitisation
Based on available data the classification criteria are not met.

Skin sensitisation
Silver hexafluoroantimonate(V)

**Skin sensitisation**
Based on available data the classification criteria are not met.

**Germ cell mutagenicity**
Based on available data the classification criteria are not met.

**Genotoxicity - in vitro**
Based on available data the classification criteria are not met.

**Carcinogenicity**
Based on available data the classification criteria are not met.

**IARC carcinogenicity**
No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**Reproductive toxicity**
Based on available data the classification criteria are not met.

**Reproductive toxicity - fertility**
Based on available data the classification criteria are not met.

**Reproductive toxicity - development**
Based on available data the classification criteria are not met.

**Specific target organ toxicity - single exposure**
**STOT - single exposure**
Not classified as a specific target organ toxicant after a single exposure.

**Specific target organ toxicity - repeated exposure**
**STOT - repeated exposure**
Not classified as a specific target organ toxicant after repeated exposure.

**Aspiration hazard**
Not relevant. Solid.

**General information**
Dust may irritate the eyes and the respiratory system. The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

**Inhalation**
Corrosive to the respiratory tract. Symptoms following overexposure may include the following: Severe irritation of nose and throat.

**Ingestion**
May cause chemical burns in mouth, oesophagus and stomach. Symptoms following overexposure may include the following: Severe stomach pain. Nausea, vomiting.

**Skin contact**
Causes severe burns. Symptoms following overexposure may include the following: Pain or irritation. Redness. Blistering may occur.

**Eye contact**
Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness.

**Route of exposure**
Ingestion Inhalation Skin and/or eye contact

**Target organs**
No specific target organs known.

**SECTION 12: Ecological Information**

**Ecotoxicity**
Toxic to aquatic life with long lasting effects.

**12.1. Toxicity**
This product contains a substance that has not yet been fully tested and may have unforeseen effects.

**12.2. Persistence and degradability**
**Persistence and degradability**
The degradability of the product is not known.

**12.3. Bioaccumulative potential**
**Bioaccumulative potential**
No data available on bioaccumulation.

**Partition coefficient**
No data available.
Silver hexafluoroantimonate(V)

12.4. Mobility in soil

Mobility  No data available.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment  This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects  None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information  Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID)  3260
UN No. (IMDG)  3260
UN No. (ICAO)  3260
UN No. (ADN)  3260

14.2. UN proper shipping name

Proper shipping name (ADR/RID)  CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Silver hexafluoroantimonate(V))
Proper shipping name (IMDG)  CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Silver hexafluoroantimonate(V))
Proper shipping name (ICAO)  CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Silver hexafluoroantimonate(V))
Proper shipping name (ADN)  CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Silver hexafluoroantimonate(V))

14.3. Transport hazard class(es)

ADR/RID class  8
ADR/RID classification code  C2
ADR/RID label  8
IMDG class  8
ICAO class/division  8
ADN class  8

Transport labels

14.4. Packing group

ADR/RID packing group  II
Silver hexafluoroantimonate(V)

IMDG packing group II
ADN packing group II
ICAO packing group II

14.5. Environmental hazards
Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user
IMDG Code segregation group 1. Acids
EmS F-A, S-B
ADR transport category 2
Emergency Action Code 2X
Hazard Identification Number (ADR/RID) 80
Tunnel restriction code (E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

SECTION 15: Regulatory information

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

15.2. Chemical safety assessment
No chemical safety assessment has been carried out.

Inventories
US - TSCA Present.

SECTION 16: Other information
Silver hexafluoroantimonate(V)

<table>
<thead>
<tr>
<th>Abbreviations and acronyms used in the safety data sheet</th>
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<tbody>
<tr>
<td>ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.</td>
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<tr>
<td>ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.</td>
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<tr>
<td>RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.</td>
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<td>IATA: International Air Transport Association.</td>
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<td>IMDG: International Maritime Dangerous Goods.</td>
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<td>CAS: Chemical Abstracts Service.</td>
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<td>ATE: Acute Toxicity Estimate.</td>
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<td>LC₅₀: Lethal Concentration to 50 % of a test population.</td>
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<tr>
<td>LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).</td>
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<tr>
<td>EC₅₀: 50% of maximal Effective Concentration.</td>
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<td>PBT: Persistent, Bioaccumulative and Toxic substance.</td>
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<td>vPvB: Very Persistent and Very Bioaccumulative.</td>
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</table>

Training advice: Only trained personnel should use this material.

Revision date: 10/11/2017
Revision: 1
SDS number: 144926

Hazard statements in full:
- H302 Harmful if swallowed.
- H312 Harmful in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H318 Causes serious eye damage.
- H332 Harmful if inhaled.
- H411 Toxic to aquatic life with long lasting effects.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.