

1. Identification

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| Product identifier | SAMARIUM NITRATE, 99.9% | |
| Other means of identification | | |
| Product code | A6714 | |
| Recommended use | professional, scientific and technical activities: other professional, scientific and technical activities | |
| Recommended restrictions | None known. | |
| Manufacturer/Importer/Supplier/Distributor information | | |
| Company name | GFS Chemicals, Inc. | |
| Address | P.O. Box 245 Powell OH 43065 US | |
| Telephone | Phone | 740-881-5501 |
| | Toll Free | 800-858-9682 |
| | Fax | 740-881-5989 |
| Website | www.gfschemicals.com | |
| E-mail | service@gfschemicals.com | |
| Emergency phone number | Emergency Assistance | Chemtrec 800-424-9300 |

2. Hazard(s) identification

| | | |
|-------------------------|-----------------------------------|------------|
| Physical hazards | Oxidizing solids | Category 3 |
| Health hazards | Skin corrosion/irritation | Category 2 |
| | Serious eye damage/eye irritation | Category 1 |
| OSHA hazard(s) | Not classified. | |
| Label elements | | |



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| Signal word | Danger |
| Hazard statement | May intensify fire; oxidizer. Causes skin irritation. Causes serious eye damage. |
| Precautionary statement | |
| Prevention | Keep away from heat. Keep/Store away from clothing and other combustible materials. Take any precaution to avoid mixing with combustibles. Wash thoroughly after handling. Wear protective gloves/eye protection/face protection. |
| Response | IF ON SKIN: Wash with plenty of soap and water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician. In case of fire: Use water for extinction. |
| Storage | Not available. |
| Disposal | Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. |
| Hazard(s) not otherwise classified (HNOC) | Not classified. |

3. Composition/information on ingredients

Substances

| Hazardous components | | | |
|----------------------|--------------------------|------------|-----|
| Chemical name | Common name and synonyms | CAS number | % |
| SAMARIUM NITRATE | | 13759-83-6 | 100 |

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

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| Inhalation | Move to fresh air. Call a physician if symptoms develop or persist. |
| Skin contact | Remove contaminated clothing. Wash off with soap and plenty of water. If skin irritation occurs: Get medical advice/attention. |
| Eye contact | Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately. Get medical attention if irritation develops and persists. |
| Ingestion | Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. |
| Most important symptoms/effects, acute and delayed | Irritation of eyes and mucous membranes. May cause temporary blindness and severe eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Irritant effects. |
| Indication of immediate medical attention and special treatment needed | In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed. Provide general supportive measures and treat symptomatically. |
| General information | Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. If you feel unwell, seek medical advice (show the label where possible). Wash contaminated clothing before reuse. |

5. Fire-fighting measures

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| Suitable extinguishing media | Water. |
| Unsuitable extinguishing media | None known. |
| Specific hazards arising from the chemical | May intensify fire; oxidizer. |
| Special protective equipment and precautions for firefighters | Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. |
| Fire-fighting equipment/instructions | Move containers from fire area if you can do so without risk. In the event of fire, cool tanks with water spray. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out. |
| Specific methods | Cool containers exposed to flames with water until well after the fire is out. |

6. Accidental release measures

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| Personal precautions, protective equipment and emergency procedures | Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering them. Wear appropriate personal protective equipment. |
| Methods and materials for containment and cleaning up | Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water. Stop the flow of material, if this is without risk. Following product recovery, flush area with water. Prevent entry into waterways, sewer, basements or confined areas. For waste disposal, see section 13 of the MSDS. |
| Environmental precautions | Avoid discharge into drains, water courses or onto the ground. |

7. Handling and storage

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| Precautions for safe handling | Take any precaution to avoid mixing with combustibles. Keep away from heat. Do not get this material in contact with eyes. Avoid contact with skin. Wash hands thoroughly after handling. |
| Conditions for safe storage, including any incompatibilities | Keep container tightly closed. Do not store near combustible materials. Keep out of the reach of children. Store in a cool, dry place out of direct sunlight. |

8. Exposure controls/personal protection

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| Occupational exposure limits | No exposure limits noted for ingredient(s). |
| Biological limit values | No biological exposure limits noted for the ingredient(s). |
| Appropriate engineering controls | Provide eyewash station. |
| Individual protection measures, such as personal protective equipment | |
| Eye/face protection | Wear eye/face protection. |
| Skin protection | |
| Hand protection | Wear protective gloves. |
| Other | Wear suitable protective clothing. Wear protective gloves. |

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| Respiratory protection | No personal respiratory protective equipment normally required. |
| Thermal hazards | Not available. |
| General hygiene considerations | Do not get in eyes. Avoid contact with skin. Wash hands before breaks and immediately after handling the product. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice. |

9. Physical and chemical properties

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|---|------------------|
| Appearance | Crystalline. |
| Physical state | Solid. |
| Form | Solid. |
| Color | Pale yellow |
| Odor | Odorless. |
| Odor threshold | Not available. |
| pH | Not available. |
| Melting point/freezing point | 172.4 °F (78 °C) |
| Initial boiling point and boiling range | Not available. |
| Flash point | Not available. |
| Evaporation rate | Not available. |
| Flammability (solid, gas) | Not applicable. |
| Upper/lower flammability or explosive limits | |
| Flammability limit - lower (%) | Not available. |
| Flammability limit - upper (%) | Not available. |
| Explosive limit - lower (%) | Not available. |
| Explosive limit - upper (%) | Not available. |
| Vapor pressure | Not available. |
| Vapor density | Not available. |
| Relative density | Not available. |
| Solubility(ies) | Very soluble. |
| Partition coefficient (n-octanol/water) | Not available. |
| Auto-ignition temperature | Not available. |
| Decomposition temperature | Not available. |
| Viscosity | Not available. |
| Other information | |
| Molecular formula | Sm(NO3)3.6H2O |
| Molecular weight | 444.48 |
| Specific gravity | 2.375 |

10. Stability and reactivity

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| Reactivity | Not available. |
| Chemical stability | Risk of ignition. Material is stable under normal conditions. |
| Possibility of hazardous reactions | Hazardous polymerization does not occur. |
| Conditions to avoid | The substance is hygroscopic and will absorb water by contact with the moisture in the air. Excessive heat. |
| Incompatible materials | None known. |
| Hazardous decomposition products | May include oxides of nitrogen. |

11. Toxicological information

Information on likely routes of exposure

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| Ingestion | Due to lack of data the classification is not possible. |
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| Inhalation | Due to lack of data the classification is not possible. |
| Skin contact | Not available. |
| Eye contact | Causes serious eye damage. |
| Symptoms related to the physical, chemical and toxicological characteristics | Permanent eye damage including blindness could result. Irritant effects. |
| Information on toxicological effects | |
| Acute toxicity | Not available. |
| Skin corrosion/irritation | Causes skin irritation. |
| Serious eye damage/eye irritation | Causes serious eye damage. |
| Respiratory sensitization | Due to lack of data the classification is not possible. |
| Skin sensitization | Due to lack of data the classification is not possible. |
| Germ cell mutagenicity | Due to lack of data the classification is not possible. |
| Carcinogenicity | This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. |
| Reproductive toxicity | Due to lack of data the classification is not possible. |
| Specific target organ toxicity - single exposure | Due to lack of data the classification is not possible. |
| Specific target organ toxicity - repeated exposure | Due to lack of data the classification is not possible. |
| Aspiration hazard | Due to lack of data the classification is not possible. |

12. Ecological information

| | |
|--------------------------------------|--|
| Ecotoxicity | No ecotoxicity data noted for the ingredient(s). |
| Persistence and degradability | No data is available on the degradability of this product. |
| Bioaccumulative potential | Not available. |
| Mobility in soil | Not available. |
| Other adverse effects | Not available. |

13. Disposal considerations

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| Disposal instructions | Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose of contents/container in accordance with local/regional/national/international regulations. |
| Local disposal regulations | Not available. |
| Hazardous waste code | D001: Waste Flammable material with a flash point <140 F |
| Waste from residues / unused products | Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). |
| Contaminated packaging | Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied. |

14. Transport information

DOT

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|-------------------------------------|---|
| UN number | UN1477 |
| UN proper shipping name | Nitrates, inorganic, n.o.s. (SAMARIUM NITRATE) |
| Transport hazard class(es) | 5.1 |
| Subsidiary class(es) | Not available. |
| Packing group | III |
| Special precautions for user | Read safety instructions, SDS and emergency procedures before handling. |
| Labels required | 5.1 |
| Special provisions | IB8, IP3, T1, TP33 |
| Packaging exceptions | 152 |
| Packaging non bulk | 213 |
| Packaging bulk | 240 |

IATA

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|------------------|--------|
| UN number | UN1477 |
|------------------|--------|

UN proper shipping name Nitrates, inorganic, n.o.s. (SAMARIUM NITRATE)
Transport hazard class(es) 5.1
Subsidiary class(es) -
Packaging group III
Environmental hazards No
Labels required Not available.
ERG Code 5L
Special precautions for user Not available.

IMDG

UN number UN1477
UN proper shipping name NITRATES, INORGANIC, N.O.S. (SAMARIUM NITRATE)
Transport hazard class(es) 5.1
Subsidiary class(es) -
Packaging group III
Environmental hazards
Marine pollutant No
Labels required Not available.
EmS F-A, S-Q
Special precautions for user Not available.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No information available.

DOT



IATA; IMDG



15. Regulatory information

US federal regulations CERCLA/SARA Hazardous Substances - Not applicable.

All components are on the U.S. EPA TSCA Inventory List.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not on regulatory list.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical No

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Not listed.

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Not regulated.

DEA Exempt Chemical Mixtures Code Number

Not regulated.

Food and Drug Administration (FDA) Not regulated.

US state regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

SAMARIUM NITRATE (CAS 13759-83-6) 500 lbs

US. Pennsylvania RTK - Hazardous Substances

Not regulated.

US. Rhode Island RTK

SAMARIUM NITRATE (CAS 13759-83-6)

US. California Proposition 65

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Not listed.

International Inventories

| Country(s) or region | Inventory name | On inventory (yes/no)* |
|-----------------------------|--|------------------------|
| Australia | Australian Inventory of Chemical Substances (AICS) | No |
| Canada | Domestic Substances List (DSL) | No |
| Canada | Non-Domestic Substances List (NDSL) | Yes |
| China | Inventory of Existing Chemical Substances in China (IECSC) | No |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | Yes |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | No |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | No |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes |

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

16. Other information, including date of preparation or last revision

Issue date December-11-2013

Version # 01

Further information Not available.

Disclaimer

The information in the sheet was written based on the best knowledge and experience currently available. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.

Revision Information

Product and Company Identification: Product and Company Identification