



SAFETY DATA SHEET

1. Identification

Product identifier	SODIUM SULFATE, ANHYDROUS, POWDER, REAGENT (ACS)		
Other means of identification			
Product code	2454		
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	Not classified.
Health hazards	Not classified.
OSHA hazard(s)	Not classified.
	No hazards resulting from the material as supplied.

Label elements

Hazard symbol	No symbol.
Signal word	Not available.
Hazard statement	Not available.
Precautionary statement	
Prevention	Not available.
Response	Not available.
Storage	Not available.
Disposal	Not available.
Hazard(s) not otherwise classified (HNOC)	Not classified.

3. Composition/information on ingredients

Substances

Non-hazardous components

Chemical name	Common name and synonyms	CAS number	%
SODIUM SULFATE		7757-82-6	100

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

4. First-aid measures

Inhalation	If dust from the material is inhaled, remove the affected person immediately to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Rinse skin with water/shower. Get medical attention if irritation develops and persists.
Eye contact	Flush eyes with water as a precaution.
Ingestion	Have victim rinse mouth thoroughly with water. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed	Not available.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media	Use extinguishing agent suitable for type of surrounding fire. Water.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	None known.
Special protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Fire-fighting equipment/instructions	Move containers from fire area if you can do it without risk. In the event of fire, cool tanks with water spray.
Specific methods	Cool containers exposed to flames with water until well after the fire is out.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Avoid inhalation of dust from the spilled material.
Methods and materials for containment and cleaning up	Should not be released into the environment. This product is miscible in water. Sweep up or gather material and place in appropriate container for disposal. Collect dust or particulates using a vacuum cleaner with a HEPA filter. After removal flush contaminated area thoroughly with water. If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. Sweep up or vacuum up spillage and collect in suitable container for disposal. Collect dust using a vacuum cleaner equipped with HEPA filter. Avoid the generation of dusts during clean-up. Following product recovery, flush area with water. Small Dry Spills: With clean shovel place material into clean, dry container and cover loosely; move containers from spill area. For waste disposal, see section 13 of the MSDS.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not contaminate water.

7. Handling and storage

Precautions for safe handling	Avoid dust formation. Do not breathe dust from this material. In case of insufficient ventilation, wear suitable respiratory equipment. Guard against dust accumulation of this material. Provide appropriate exhaust ventilation at places where dust is formed. Avoid contact with skin and eyes. Avoid release to the environment. Practice good housekeeping.
Conditions for safe storage, including any incompatibilities	Store in a well-ventilated place. Keep container tightly closed. Avoid dust formation. Guard against dust accumulation of this material.

8. Exposure controls/personal protection

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	Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing. Keep formation of airborne dusts to a minimum.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Use tight fitting goggles if dust is generated.
Skin protection	
Hand protection	Not normally needed.
Other	Normal work clothing (long sleeved shirts and long pants) is recommended.
Respiratory protection	Under normal conditions, respirator is not normally required. Wear respirator with dust filter. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.
Thermal hazards	Not available.
General hygiene considerations	Do not breathe dust. Avoid contact with eyes. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance	Powder.
Physical state	Solid.
Form	Solid.
Color	White.
Odor	Odorless.
Odor threshold	Not available.
pH	5.2 - 9.2 (5% solution in water)
Melting point/freezing point	1630.4 °F (888 °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 density	Not available.
Relative density	Not available.
Solubility(ies)	Soluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	2.67 g/cm ³ estimated
Molecular formula	Na ₂ SO ₄
Molecular weight	142.06 g/mol
Specific gravity	2.671

10. Stability and reactivity

Reactivity	Not available.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Avoid spread of dust. None known.
Incompatible materials	None known.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Based on available data, the classification criteria are not met.
Inhalation	Inhalation of dusts may cause respiratory irritation.
Skin contact	Due to lack of data the classification is not possible.
Eye contact	Due to lack of data the classification is not possible.

Symptoms related to the physical, chemical and toxicological characteristics Not available.

Information on toxicological effects

Acute toxicity

Product	Species	Test Results
SODIUM SULFATE (CAS 7757-82-6)		
Acute		
<i>Oral</i>		
LD50	Rat	5989 mg/kg
<i>Other</i>		
LD50	Rabbit	> 4 g/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Due to lack of data the classification is not possible.
Serious eye damage/eye irritation	Dust in the eyes will cause irritation. Irritating to eyes.
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.
Further information	This product has no known adverse effect on human health.

12. Ecological information

Ecotoxicity Contains a substance which causes risk of hazardous effects to the environment.

Product	Species	Test Results
SODIUM SULFATE (CAS 7757-82-6)		
Crustacea	LC50	Green or European shore crab (<i>Carcinus maenas</i>) > 6400 mg/l, 24 hours
Aquatic		
Crustacea	EC50	Water flea (<i>Ceriodaphnia dubia</i>) 2807 - 3535 mg/l, 48 hours
		2807 - 3535 mg/l, 48 hours
		Water flea (<i>Daphnia magna</i>) 4547 mg/l, 4.2 days
	LC50	Common bay mussel, blue mussel (<i>Mytilus edulis</i>) > 6400 mg/l, 24 hours
		False saddle oyster (<i>Anomia ephippium</i>) > 6400 mg/l, 24 hours
		Hermit crab (<i>Pagurus bernhardus</i>) > 6400 mg/l, 24 hours
		Limpet (<i>Acmaea testudinalis</i>) > 6400 mg/l, 24 hours
		Opossum shrimp (<i>Americamysis bahia</i>) 2.41 mg/l, 24 hours
		1.85 - 2.66 mg/l, 48 hours
		1.56 - 2.34 mg/l, 96 hours
		Polychaete (<i>Lepidonotus squamatus</i>) > 6400 mg/l, 24 hours
		Polychaete (<i>Polydora</i>) > 6400 mg/l, 24 hours
		Pond snail (<i>Lymnaea</i>) 5401 mg/l, 24 hours
		5400 mg/l, 48 hours
		5.4 mg/l, 72 hours
		3.553 mg/l, 96 hours

Product		Species	Test Results
		Sea urchin (<i>Psammechinus miliaris</i>)	> 6400 mg/l, 24 hours
		Water flea (<i>Ceriodaphnia dubia</i>)	3540 - 3740 mg/l, 24 hours 1770 - 3540 mg/l, 48 hours
		Water flea (<i>Daphnia magna</i>)	8384 mg/l, 24 hours 6800 mg/l, 24 hours 6100 mg/l, 48 hours 5790 - 7070 mg/l, 24 hours 4547 mg/l, 96 hours 4060 - 5360 mg/l, 48 hours 2564 mg/l, 48 hours 725 mg/l, 72 hours 630 mg/l, 96 hours
Fish	LC50	Bluegill (<i>Lepomis macrochirus</i>)	17500 mg/l, 24 hours 13500 mg/l, 96 hours 13000 mg/l, 96 hours 12750 mg/l, 96 hours 12500 mg/l, 96 hours 4380 mg/l, 96 hours 3040 mg/l, 96 hours
		Fathead minnow (<i>Pimephales promelas</i>)	> 7070 mg/l, 24 hours > 6800 mg/l, 48 hours > 6800 mg/l, 96 hours
		Sailfin molly (<i>Poecilia latipinna</i>)	20040 mg/l, 24 hours 15996 mg/l, 48 hours
		Starfish (<i>Asterias rubens</i>)	> 6400 mg/l, 24 hours
		Striped bass (<i>Morone saxatilis</i>)	1100 mg/l, 24 hours 1100 mg/l, 48 hours 1100 mg/l, 72 hours 1100 mg/l, 96 hours 790 mg/l, 24 hours 790 mg/l, 48 hours 790 mg/l, 72 hours 790 mg/l, 96 hours 650 mg/l, 24 hours 450 mg/l, 24 hours 320 mg/l, 48 hours 220 mg/l, 48 hours 160 mg/l, 72 hours 110 mg/l, 72 hours 81 mg/l, 96 hours 56 mg/l, 96 hours
		Western mosquitofish (<i>Gambusia affinis</i>)	7800 mg/l, 24 hours 5670 mg/l, 48 hours 5400 mg/l, 24 hours 5350 mg/l, 96 hours 3940 mg/l, 48 hours 3710 mg/l, 96 hours

Product	Species	Test Results
		3200 mg/l, 6 days
		2200 mg/l, 6 days
Other	LC50	Diatom (Nitzschia linearis) 1900 mg/l, 5 days

* Estimates for product may be based on additional component data not shown.

Persistence and degradability	None known.
Bioaccumulative potential	Not available.
Mobility in soil	Not available.
Other adverse effects	Not available.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Can be landfilled when in compliance with local regulations. Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.
Local disposal regulations	Not available.
Hazardous waste code	Not regulated.
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.

14. Transport information

DOT

Not regulated as a hazardous material by DOT.

IATA

Not regulated as a dangerous good.

IMDG

Not regulated as a dangerous good.

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

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 - No
 Delayed Hazard - No
 Fire Hazard - No
 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) Total food additive
Indirect food additive
GRAS food additive

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

SODIUM SULFATE (CAS 7757-82-6)

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

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

SODIUM SULFATE (CAS 7757-82-6)

US. Rhode Island RTK

Not regulated.

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)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
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	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
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 May-15-2013

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 Codes
Composition / Information on Ingredients: Disclosure Overrides