

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

GHS Product identifier:	Sanygen pH Down Non-Fuming Sulfuric Acid
Other means of identification:	Item Codes: S-B8-04, S-B8-15, S-B8-55, S-B8-BULK
Synonyms:	Oil of Vitriol, Babcock acid, Sulphuric acid, Hydrogen sulfate
Recommended use:	Reduces the pH of swimming pool & spa/hot tub water
Restriction on Use:	None known
Manufacturer:	Address: Miami Products & Chemical Co. 520 Lonoke St. Dayton, OH 45403 Tel: (800) 776-1313 Fax: (937) 253-1559
24 Hour Emergency Telephone Number:	CHEMTREC: (800) 424-9300 within the United States CHEMTREC: (703) 527-3887 if international CHEMTREC Contract No: CCN14419

SECTION 2: HAZARD IDENTIFICATION

OSHA REGULATORY STATUS: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

GHS Classification in accordance with 29 CFR 1910 (GHS HCS)

Corrosive to metals.	Category 1
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 2
Acute toxicity, inhalation	Category 4
Acute toxicity, oral	Category 4

GHS label elements, including precautionary statements



Pictogram(s):

Signal Word: DANGER

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Revision No.: 1

GHS Hazard Statements:

Physical hazard statements:

H290: May be corrosive to metals.

Health hazard statements:

H302: Harmful if swallowed.

H314: Causes severe skin burns and eye damage.

H332: Harmful if inhaled.

H351: Suspected of causing cancer.

GHS Precautionary Statements:

General Precautionary Statements:

P101: If medical advice is needed, have product container or label at hand.

P102: Keep out of reach of children.

P103: Read label before use.

Prevention Precautionary Statements:

P201: Obtain special instructions before use.

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

P262: Do not get in eyes, on skin, or on clothing.

P264: Wash all affected areas thoroughly after handling.

P270: Do not eat, drink, or smoke when using this product.

P271: Use only outdoors or in a well-ventilated area.

P280: Wear protective gloves/clothing and eye/face protection.

P281: Use personal protective equipment as required.

Response Precautionary Statements:

P301+P330+P331+P312: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or physician if you feel unwell.

P303+P361+P353: IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water.

P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310: Immediately call a POISON CENTER or physician.

P363: Wash contaminated clothing before reuse.

P321: Specific treatment (see First Aid information on product label and/or Section 4 of the SDS).

P390: Absorb spillage to prevent material damage.

Storage Precautionary Statements:

P405: Store locked up.

P406: Store in corrosive resistant container with a resistant inner liner.

Disposal Precautionary Statements:

P501: Dispose of contents/container in accordance with local, regional, and national regulations.

Hazards not otherwise classified (HNOC) or not covered by GHS: None identified.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Common Chemical Name	Percent (%)	CAS Number
Sulfuric Acid	38.5	7664-93-9
Water	61.5	7732-18-5

Formula: H₂SO₄
Molecular Weight: 98.08 g/mol

SECTION 4: FIRST-AID MEASURES

General advice: If in immediate danger, move out of the affected areas. Show this Safety Data Sheet (SDS) to the attending medical personnel and make sure they are aware of the material(s) involved.

Inhalation: In inhaled, remove the victim to fresh air as soon as possible. If not breathing, give artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. If respiration or pulse has stopped, have a trained person administer basic life support (CPR) and call for emergency services immediately. **WARNING:** it may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious, or corrosive.

Skin Contact: Immediately flush skin with running water for at least 20 minutes. Under running water remove contaminated clothing, jewelry, and shoes. If irritation persists, repeat flushing. For burns, obtain medical attention. Discard heavily contaminated clothing and shoes in a manner which limits further exposure. Otherwise, wash clothing separately before reuse.

Eye Contact: Immediately flush eyes with running water for a minimum of 20 minutes. Hold eyelids open during flushing. After the first 5 minutes of flushing remove contact lenses, if present and easy to do, and continue rinsing. If irritation persists, repeat flushing. Obtain medical attention IMMEDIATELY. Do not transport victim until the recommended flushing period is completed unless flushing can be continued during transport.

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Give large amounts of water. If vomiting occurs spontaneously, keep airway clear. Give more water when vomiting stops. **GET MEDICAL ATTENTION IMMEDIATELY!**

Most Important Symptoms and Effects (Both Acute and Delayed)

Acute Symptoms/Effects: Corrosive effects. Symptoms may include stinging, tearing, redness, swelling, burning, and blurred vision. Permanent eye damage including blindness may result. Inhalation of fumes or acid mist/vapors may result in irritation and/or burns to the upper respiratory system, including the mouth, throat, and nose. Ingestion may result in severe burns to the mouth, esophagus, and stomach.

Delayed Symptoms/Effects: Repeated and prolonged skin contact could result in dermatitis.

Medical Conditions Aggravated by Exposure: May aggravate pre-existing conditions such as: eye disorders that decrease tear production or have reduced integrity, skin disorders that compromise the integrity of the skin and respiratory conditions including asthma and other breathing disorders.

Protection of First-Responders: Protect yourself by avoiding contact with this material. Avoid contact with skin and eyes. Do not breathe vapors or spray mist. Do not ingest. Use personal protective equipment (PPE). Refer to Section 8 for specific personal protective equipment recommendations.

Notes to Physician: Treat as a corrosive due to the low pH of this material. Treat symptomatically and follow normal procedures for airway, breathing, and circulation care. The absence of visible signs or symptoms of burns does NOT reliably exclude the presence of actual tissue damage.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable extinguishing media: Dry chemical, foam or carbon dioxide. Do NOT use water on material. However, water spray may be used to keep fire exposed chemicals cool.

Specific hazards arising from the chemical: Products of combustion are not available since material is non-flammable. However, products of decomposition include fumes of oxides of sulfur. Sulfuric acid will react with water or steam to produce toxic and corrosive fumes. This product reacts with carbonates to generate carbon dioxide gas. This product also reacts with cyanides and sulfides to form poisonous hydrogen cyanide and hydrogen sulfide, respectively.

Special protective actions for fire-fighters: Firefighters should wear protective equipment and NIOSH approved self-contained breathing apparatus with full face piece operated in positive pressure mode in a fire involving this material. Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Keep unnecessary personnel away and notify the appropriate authorities. Avoid contact with skin, eyes and clothing and avoid breathing fumes, vapour, mist, or spray. Vacate the affected area as soon and as safely as possible and do not return until the odors have dissipated. Do not touch damaged containers or spilled material unless you are wearing the appropriate personal protective equipment (PPE), which can be found in Section 8 of this SDS. Be sure to wear acid resistant protective clothing.

Environmental precautions: Do not discharge into drains, sewers, water courses or onto the ground. This material is highly acidic and may lower the pH of the surface waters with low buffering capacity. The appropriate agencies must be informed of all significant releases.

Methods and materials for containment and cleaning up:

SMALL SPILL: Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary, neutralize the residue with a dilute solution of sodium carbonate.

LARGE SPILL: Corrosive liquid. Stop leak if you can do so without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Use water spray to reduce vapors. Prevent entry into sewers, basements, or confined spaces; dike if needed. Call for assistance on disposal. Neutralize the residue with a dilute solution of sodium carbonate. Be careful that the product is not present at a concentration level above the TLV. Check the TLV in Section 8: EXPOSURE CONTROL/PERSONAL PROTECTION of the SDS and with local authorities.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling: People working with this chemical should be properly trained regarding its hazards and its safe use. Avoid contact with eyes, skin, and clothing. Do not ingest. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Ensure all containers are labeled. Keep containers closed when not in use. Empty containers may contain hazardous residues. Wear appropriate personal protective equipment (PPE). Avoid generating mist. Use smallest possible amounts in designated areas with adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Use corrosion-resistant transfer equipment when dispensing. Never add water to this product. Small amounts of acid should always be added to large amounts of water.

Conditions for safe storage: This product also reacts very violently with water. Store in a cool, dry, well-ventilated area, out of direct sunlight. If possible, store in the original container. If this is not possible, store this material in a corrosion resistant container with a corrosion resistant inner liner. Keep containers tightly closed when not in use and when empty. Protect from damage. Store away from incompatible materials such as: oxidizing agents, combustible materials, organic materials, most metals, alkalis, bleach, and moisture. Use corrosion-resistant structural materials, lighting and ventilation systems in the storage area. Outdoor storage tanks should be suitably diked or otherwise provided with an adequate means of secondary containment. Appropriate secondary containment measures should be taken to prevent spills or leaks from indoor storage tanks and tank-truck unloading stations from entering sewers or other channels that discharge directly to a water body or a municipal sewage system.

Incompatibilities/conditions to avoid: Most metals. Organic materials, strong reducing agents, combustible materials, alkaline products, water, strong oxidizers, bleach.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limit(s): As listed below

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric Acid	TWA: 0.2 mg/m ³ thoracic fraction	TWA: 1 mg/m ³	IDLH: 15 mg/m ³
		(vacated) TWA: 1 mg/m ³	TWA: 1 mg/m ³

Appropriate engineering controls: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value (TLV). Ensure that eyewash stations and safety showers are close to the work-station location(s).

Individual protection measures, such as personal protective equipment (PPE)

- Eye/face protection:** Wear splash resistant chemical goggles and full face shield. Maintain eye wash fountain and quick-drench facilities in work area.
- Skin protection:** Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.
- Respirator protection:** Use a NIOSH approved respirator for sulfuric acid or mist as applicable to your needs. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant the use of a respirator.
- Thermal hazards:** Not applicable.
- General hygiene practices:** It is important to observe good personal hygiene measures, which should include washing immediately after handling this product and before eating, drinking, smoking, chewing gum, or using the toilet. Routinely wash work clothing to remove any residual contaminants.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Color	Clear
Odor	Odorless
Odor threshold	No data available
pH	< 1
Melting point/freezing point	-35° C (-31° F)
Initial boiling point and boiling range	> 100° C (212° F)
Flash point	Not applicable
Evaporation rate	No data available
Flammability limit – lower (%)	Not applicable
Flammability limit – upper (%)	Not applicable
Explosive limit – lower (%)	Not applicable
Explosive limit – upper (%)	Not applicable
Vapor Pressure	< 0.3 mm/Hg @ 20° C
Vapor Density	< 3.4 (Air=1)
Relative density	1.29
Solubility(ies)	Completely miscible
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	Not applicable
Decomposition temperature	No data available
Viscosity	No data available

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Under normal conditions, this product is not reactive.

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: Sulfuric acid reacts violently with products containing chlorine (i.e.: bleach, chlorinating tablets, and certain household chemicals). May react with chemicals to produce toxic gases such as sulfur dioxide and chlorine.

Conditions to avoid: Moisture, heat, and incompatible materials listed below.

Incompatible materials: Most common metals. Reactive with oxidizing agents, reducing agents, combustible materials, organic materials, acids, alkalis, moisture.

Hazardous decomposition products: Hydrogen. Sulfur oxides.

Hazardous polymerization: Does not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICITY DATA

Chemical Name	Oral LD ₅₀	Inhalation LC ₅₀
Sulfuric Acid	2140 mg/kg (Rat)	375 mg/m ³ (Rat) 510 mg/m ³ (Guinea pig)

Information on likely routes of exposure

Ingestion: May cause severe respiratory irritation.

Inhalation: May cause severe irritation of the mouth, throat, esophagus, and stomach.

Skin contact: May cause severe irritation, burns, and ulcerations. Sulfuric acid is not readily absorbed through the skin and is not a skin sensitizer.

Eye contact: May cause severe irritation, burns, corneal damage, or blindness.

Symptoms related to the physical, chemical and toxicological characteristics: See Section 4: FIRST AID MEASURES.

Germ cell mutagenicity: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity

IARC: Group 1 – Carcinogenic to Humans.

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ACGIH: A2 – Suspected Human Carcinogen.

NTP: Known Carcinogen.

OSHA: Present

Reproductive toxicity: No data available.

Specific target organ toxicity – single exposure: No data available.

Specific target organ toxicity – repeated exposure: May cause damage to organs through prolonged or repeated exposure.

Aspiraton hazard: Not classified; however, droplets of the product may be aspirated into the lungs through ingestion or vomiting and may cause a serious chemical pneumonia.

Chronic effects: Repeated or prolonged skin contact may result in dermatitis.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY DATA

Chemical Name	Fish LC ₅₀
Sulfuric Acid	Flounder: 100-130 mg/L—48 hours aerated water/conditions of bioassay not specified.
	Shrimp: 80-90 mg/L—48 hours aerated water/conditions of bioassay not specified.
	Prawn: 42.5ppm/48 hour salt water/conditions of bioassay not specified.

Persistence and degradability: No data available.

Bioaccumulative potential: No data available.

Mobility in soil: No data available.

Other adverse effects: This material may be toxic to aquatic life. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal methods: Collect and reclaim or dispose in sealed containers at a licensed waste disposal site. This material and its container must be disposed of as a 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. Dispose of contents/container in accordance with local/regional/national regulations.

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 methods.

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Contaminated packaging: Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: TRANSPORT INFORMATION

U.S. DOT 49 CFR 172.101

UN NUMBER: UN2796
UN PROPER SHIPPING NAME: Sulfuric acid with not more than 51% acid
TRANSPORT HAZARD CLASS: 8
PACKING GROUP: II
ENVIRONMENTAL HAZARDS: None known
REPORTABLE QUANTITY (RQ): 1,000 Lbs.
SPECIAL PRECAUTIONS FOR USER: Read safety instructions, SDS and emergency procedures before handling.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS:

CERCLA:

Chemical Name	Hazardous Substances RQ's	CERCLA/S ARA RQ	Reportable Quantity (RQ)
Sulfuric acid	1,000 Lbs.	1,000 Lbs.	1,000 Lbs.

SARA 311/312 Hazard Categories:

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	Yes

SARA 313:

Chemical Name	CAS No.	Weight %	Threshold Values %
Sulfuric acid	7664-93-9	38.5	1.0

CWA (Clean Water Act):

Component	Reportable Quantity (RQ)	Toxic Pollutants	Priority Pollutants	Hazardous Substances
Sulfuric acid	1,000 Lbs.	N/A	N/a	Yes

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US STATE REGULATIONS:

CALIFORNIA PROPOSITION 65:

Chemical Name	California Proposition 65
Sulfuric acid	Carcinogen

US STATE RIGHT-TO-KNOW REGULATIONS:

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Sulfuric acid	Yes	Yes	Yes

SECTION 16: OTHER INFORMATION

SDS Preparation Date:	April 7, 2015
SDS Revision Date:	April 7, 2015
SDS Revision No.:	1

REASONS FOR REVISION:

- Updated SDS header
- Changed the SDS format to meet the GHS requirements of the revised 2012 OSHA HCS (29 CFR 1910.1200)
- Product identifier has been added or updated (See Section 1)
- Revised Hazards Identification information (See Section 2)
- Added GHS Information (See Section 2)
- Updated First-Aid Measures (See Section 4)
- Updated Fire Fighting Measures (See Section 5)
- Revised Accidental Release Measures (See Section 6)
- Revised Handling and Storage Recommendations (See Section 7)
- Revised Exposure Controls/Personal Protection (Section 8)
- Updated Physical and Chemical Properties (See Section 9)
- Updated Disposal Considerations (See Section 13)
- Added SDS Preparation Date, SDS Revision Date, and SDS Revision No. (See Section 16)
- Added "End of SDS Document" phrase
- Added a list of abbreviations that may have been used in the SDS

ABBREVIATIONS (please note that not all abbreviations may appear on this SDS):

ACGIH = American Conference of Governmental Industrial Hygienist
CAS = Chemical Abstract Service
CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act
CFR = Code of Federal Regulations
DOT = Department of Transportation (United States)
DSL/NDSL = Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS = European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
EN = European Norm

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EPCRA = Emergency Planning & Community Right to Know Act (1986)
EU = European Union
GHS = Global Harmonization System
HMIS = Hazardous Materials Information System
IARC = International Agency for Research on Cancer
IATA = International Air Transport Association
IDLH = Immediately Dangerous to Life or Health
IMDG = International Maritime Dangerous Goods (Code)
ICAO = International Civil Aviation Organization
NFPA = National Fire Protection Association
NIOSH = National Institute for Occupational Safety and Health
N.O.S. = Not Otherwise Specified
NTP = National Toxicology Program
OSHA = Occupational Safety and Health Administration
PBT = Persistent Bioaccumulative and Toxic
PEL = Permissible Exposure Limit;
pH = A measure of the acidity or alkalinity of a solution
PSM = Process Safety Management
RQ = Reportable Quantity
SARA = Superfund Amendments and Reauthorization Act
SDS = Safety Data Sheet
STOT = Specific Target Organ Toxicity
TLV = Threshold Limit Value
TSCA = Toxic Substance Control Act
TWA = Time-weighted Average
UN = United Nations

DISCLAIMER: This SDS generally complies with the requirements set forth in 29 CFR 1910.1200 and Annex 5, Fifth Edition (2014) Globally Harmonized System of Classification and Labeling of Chemicals (GHS). Although the information and recommendations set forth herein (hereinafter "information") are presented in good faith and believed to be correct as of the date hereof, Miami- Products & Chemical Co. makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will Miami Products & Chemical Co. be responsible for damages of any nature whatsoever resulting from the use of, misuse or reliance upon information. No representations or warranties, either expressed or implied, or merchantability, fitness for a particular purpose or any other nature are made hereunder with respect to information or the product to which information refers. Regulatory requirements are subject to change and may differ from one location to another. It is the buyer's responsibility to ensure its activities comply with federal, State, Provincial, and local laws and regulations.

The information contained in this SDS is subject to revision as additional knowledge, information, and experience is gained.

END OF SDS DOCUMENT