

1. Identification

Product identifier Acid Sulfate
Product code R-0781
Recommended use Use as directed by manufacturer for purposes directly related to water testing.
Recommended restrictions None known

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name Taylor Technologies, Inc.
Address 31 Loveton Circle
Sparks, MD 21152
United States
Telephone (410) 472-4340 Monday–Friday, 8:00 a.m.–4:30 p.m.
Website www.taylortechnologies.com
E-mail Not available
Emergency phone number (800) 837-8548

2. Hazard(s) identification

Physical hazards Corrosive to metals Category 1
Health hazards Eye damage/irritation Category 1
Skin corrosion/irritation Category 1
Environmental hazards Not currently regulated by OSHA; refer to section 12 of the SDS for additional information.
Label elements



Signal word Danger
Hazard statement May be corrosive to metals. Causes severe skin burns and eye damage.
Precautionary statement
Prevention Do not breathe mist or vapor. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.
Response IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (OR HAIR): Take off immediately all contaminated clothing. Rinse skin with water.
Wash contaminated clothing before reuse.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
Immediately call a physician or poison control center.
Storage Store locked up. Store in corrosive-resistant container with a corrosive-resistant inner liner.
Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified None

Supplemental information None

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Sodium bisulfate monohydrate	Sodium hydrogen sulfate	10034-88-5	100

4. First-aid measures

Inhalation	Move to fresh air. Give oxygen or artificial respiration if needed. Get medical attention immediately.
Skin contact	Immediately flush skin with running water for at least 20 minutes. Immediately take off all contaminated clothing. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Never give anything by mouth to a person who is unconscious or is having convulsions. Do NOT induce vomiting unless directed by physician. If vomiting occurs, keep head low so that stomach content does not get into the lungs.
Most important symptoms/effects, acute and delayed	Direct skin contact may cause corrosive skin burns, deep ulcerations, and possibly permanent scarring. Direct contact with dust may be corrosive to the eyes and may cause severe damage, including blindness. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Inhalation of dust can cause severe respiratory irritation. Symptoms may include coughing, choking, and wheezing. Inhalation could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus, and possibly the digestive tract. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep person under observation. Symptoms may be delayed.
General information	Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.

5. Firefighting measures

Suitable extinguishing media	Carbon dioxide. Dry chemical powder. Foam. Water fog. Water spray.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Firefighting equipment/instructions	Firefighters should wear full protective gear. Evacuate the area promptly. Fight fire from upwind to avoid exposure to combustion products. Cool containers/tanks with water spray. Do not get water inside container. Move containers from fire area if it can be done without risk. Prevent fire-extinguishing water from contaminating surface water or the ground water system.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Not combustible; however, the product can react with metals to form flammable and explosive hydrogen gas.
Hazardous combustion products	Sodium oxides. Sulfur oxides. Other irritating fumes and smoke.

6. Accidental release measures

Personal precautions, protective equipment, and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during cleanup. Do not breathe dust. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protective equipment, refer to section 8 of the SDS.
---	--

Methods and materials for containment and cleaning up

Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).
Sweep up or vacuum up spillage and collect in suitable container for later disposal.
Never return spills to original containers for reuse. For waste disposal, refer to section 13 of the SDS. Contaminated absorbent material may pose the same hazards as the spilled product.
In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental precautions

Avoid discharge into drains, watercourses, or onto the ground.

7. Handling and storage**Precautions for safe handling**

Do not breathe dust. Avoid dust formation. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. For personal protective equipment, refer to section 8 of the SDS. Keep away from incompatibles. Observe good industrial hygiene practices. Label containers appropriately.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry place out of direct sunlight. Store away from incompatible materials (refer to section 10 of the SDS). Protect against physical damage. Use care in handling/storage.

8. Exposure controls/personal protection**Occupational exposure limits**

No occupational exposure limits noted for the ingredient(s)

Biological limit values

No biological exposure limits noted for the ingredient(s)

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eyewash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Wear safety glasses with side shields (or goggles) and a face shield. Provide an emergency eyewash fountain and quick-drench shower in the immediate work area.

Skin protection**Hand protection**

Wear appropriate chemical-resistant gloves. Advice should be sought from glove suppliers.

Other

Wear appropriate chemical-resistant clothing.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.

Thermal hazards

When necessary, wear appropriate thermal protective clothing.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking and/or smoking. Routinely wash work clothing and protective equipment to remove contamination.

9. Physical and chemical properties**Appearance****Physical state**

Solid

Form

Crystalline

Color

White

Odor

Odorless

Odor threshold

Not available

pH

Not applicable

Melting point/freezing point

Not available

Initial boiling point and boiling range

Not applicable

Flash point

Not applicable (does not burn)

Evaporation rate

Not applicable

Flammability (solid, gas)

Not applicable

Upper/lower flammability or explosive limits

Flammability limit, lower (%)	Not applicable
Flammability limit, upper (%)	Not applicable
Explosive limit, lower (%)	Not applicable
Explosive limit, upper (%)	Not applicable
Vapor pressure	Not applicable
Vapor density	Not applicable
Relative density	2.103 g/cm ³
Solubility(ies)	
Solubility (water)	67%
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not applicable
Decomposition temperature	315°C (599°F)
Viscosity	Not applicable
Other information	
Explosive properties	Not applicable
Oxidizing properties	Not applicable
Percent volatile	Not applicable
Specific gravity	Not available

10. Stability and reactivity

Reactivity	This product is stable and nonreactive under normal conditions of use, storage, transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use
Conditions to avoid	Contact with incompatible materials. Do not use in areas without adequate ventilation.
Incompatible materials	Metal compounds
Hazardous decomposition products	None known. For hazardous combustion products, refer to section 5 of the SDS.

11. Toxicological information**Information on likely routes of exposure**

Inhalation	May cause irritation to the respiratory system
Skin contact	Causes severe skin burns
Eye contact	Causes serious eye damage
Ingestion	Causes digestive tract burns
Most important symptoms/effects, acute and delayed	<p>Direct skin contact may cause corrosive skin burns, deep ulcerations, and possibly permanent scarring. Direct contact with dust may be corrosive to the eyes and may cause severe damage, including blindness. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.</p> <p>Inhalation of dust can cause severe respiratory irritation. Symptoms may include coughing, choking, and wheezing. Inhalation could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed.</p> <p>Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus, and possibly the digestive tract. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding.</p>
Acute toxicity	This product is not classified as an acute toxicity hazard. See below for individual ingredient acute toxicity data.

Components	Species	Test Results
Sodium bisulfate monohydrate (CAS 10034-88-5)		
Acute		
<i>Dermal</i>		
LD ₅₀	Rabbit	Not available
<i>Inhalation</i>		
LC ₅₀	Rat	Not available
<i>Oral</i>		
LD ₅₀	Rat	2490 mg/kg
Skin corrosion/irritation	Causes severe skin burns and eye damage	
Serious eye damage/eye irritation	Causes serious eye damage	
Respiratory sensitization	Not expected to be a respiratory sensitizer	
Skin sensitization	Not expected to be a skin sensitizer	
Germ cell mutagenicity	Not expected to be mutagenic	
Carcinogenicity	This product is not considered to be a carcinogen by IARC, NTP, OSHA, or U.S. ACGIH.	
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)		
Not regulated		
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity, single exposure	Not classified as a specific target organ toxicity – single exposure	
Specific target organ toxicity, repeated exposure	Not classified as a specific target organ toxicity – repeated exposure	
Aspiration toxicity	Not expected to be an aspiration hazard	
Chronic effects	Frequent or prolonged contact may defat and dry the skin, leading to discomfort and dermatitis.	
12. Ecological information		
Ecotoxicity	This product is not classified as environmentally hazardous; however, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.	
Persistence and degradability	Not available	
Bioaccumulative potential	Not available	
Mobility in soil	Not available	
Other adverse effects	No other adverse environmental effects (e.g., ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.	
13. Disposal considerations		
Disposal instructions	Collect and reclaim or dispose of in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.	
Local disposal regulations	Dispose of in accordance with all applicable regulations.	
Hazardous waste code	The waste code should be assigned in discussion with the user, the producer, and the waste disposal company.	
Waste from residues/unused products	Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (refer to 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. Transportation information		
DOT		
UN number	UN3260	
UN proper shipping name	Corrosive solid, Acidic, Inorganic, N.O.S. (Sodium bisulfate monohydrate)	
Transport hazard class(es)		
Class	8	
Subsidiary risk	Not listed	

Label(s)	8
Packing group	III
Special precautions for user	Read safety instructions, SDS, and emergency procedures before handling.
Special provisions	IB8, IP3, T1, TP33
Packaging exceptions	154
Packaging, non-bulk	213
Packaging, bulk	240

IATA

UN number	UN3260
UN proper shipping name	Corrosive solid, Acidic, Inorganic, N.O.S. (Sodium bisulfate monohydrate)
Transport hazard class(es)	
Class	8
Subsidiary risk	Not listed
Packing group	III
Environmental hazards	Not listed
ERG code	8L
Special precautions for user	Read safety instructions, SDS, and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed
Cargo aircraft only	Allowed

IMDG

UN number	UN3260
UN proper shipping name	Corrosive solid, Acidic, Inorganic, N.O.S. (Sodium bisulfate monohydrate)
Transport hazard class(es)	
Class	8
Subsidiary risk	Not listed
Packing group	III
Environmental hazards	
Marine pollutant	Not listed
EmS	F-A, S-B
Special precautions for user	Read safety instructions, SDS, and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
This substance/mixture is not intended to be transported in bulk.

DOT



IATA; IMDG



15. Regulatory information

U.S. federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

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

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

Not regulated

CERCLA Hazardous Substance (40 CFR 302.4)

Not regulated

SARA 304 Emergency Release Notification

Not regulated

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1096)

Not regulated

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate hazard – yes

Delayed hazard – no

Fire hazard – no

Pressure hazard – no

Reactivity hazard – no

SARA 302 Extremely Hazardous Substance

Not regulated

SARA 311/312 Hazardous Chemical

Not regulated

SARA 313 (TRI reporting)

Not regulated

Other federal regulations

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

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

U.S. state regulations

California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not regulated

Massachusetts Right-to-Know Act

Not regulated

New Jersey Worker and Community Right-to-Know Act

Sodium bisulfate monohydrate (CAS 10034-88-5)

Pennsylvania Worker and Community Right-to-Know Act

Sodium bisulfate monohydrate (CAS 10034-88-5)

Rhode Island Right-to-Know Act

Not regulated

California Proposition 65

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.

International inventories

Country(ies) 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 Produced or Imported in China (IECSC)	yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	yes
Europe	European List of Notified Chemical Substances (ELINCS)	no
Japan	Existing and New Chemical Substances (ENCS)	yes
Korea	Existing Chemicals List (ECL)	yes
New Zealand	New Zealand Inventory of Chemicals (NZIoC)	yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA)	yes

*A "yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(ies).

A "no" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(ies).

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

List of abbreviations

ACGIH: American Conference of Governmental Industrial Hygienists
AICS: Australian Inventory of Chemical Substances
CAA: Clean Air Act
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act
CFR: Code of Federal Regulations
CSA: Canadian Standards Association
DEA: Drug Enforcement Agency
DOT: Department of Transportation
DSL: Domestic Substances List
EC: effective concentration
ECL: Existing Chemicals List
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
ENCS: Existing and New Chemical Substances
EPA: Environmental Protection Agency
HAP: hazardous air pollutants
HMIS: Hazardous Materials Identification System
HNOC: hazards not otherwise classified
HPA: Hazardous Products Act
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association
IBC Code: International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk
ICAO: International Civil Aviation Organization
IECSC: Inventory of Existing Chemical Substances Produced or Imported in China
IMDG: International Maritime Dangerous Goods
IUCLID: International Uniform Chemical Information Database
LC: lethal concentration
LD: lethal dose
MARPOL: marine pollution
MSHA: Mine Safety and Health Administration
NDSL: Non-Domestic Substances List
NFPA: National Fire Protection Association
NIOSH: National Institute of Occupational Safety and Health
NOEC: no observable effect concentration
NTP: National Toxicology Program
NZIoC: New Zealand Inventory of Chemicals
OECD: Organisation for Economic Co-operation and Development
OEL: occupational exposure limits
OSHA: Occupational Safety and Health Administration
PEL: permissible exposure limits

PICCS: Philippine Inventory of Chemicals and Chemical Substances
PPE: personal protective equipment
RCRA: Resource Conservation and Recovery
Act RQ: reportable quantity
RTECS: Registry of Toxic Effects of Chemical Substances
RTK: right to know
SARA: Superfund Amendments and Reauthorization Act
SDS: Safety Data Sheet
SDWA: Safe Drinking Water Act
STEL: short-term exposure limit
TLV: threshold limit values
TSCA: Toxic Substances Control Act
TWA: time-weighted average
VOC: volatile organic compounds
WEL: workplace exposure limit

Disclaimer

The information in the Safety Data Sheet is offered for your consideration and guidance for safe handling, use, storage, transportation, disposal, and release of this product and is not considered a warranty or quality specification. Taylor Technologies, Inc., disclaims all expressed or implied warranties and assumes no responsibility for the accuracy or completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process.

License granted to make unlimited paper copies for internal use only. This Safety Data Sheet may not be changed, or altered, in any way without the expressed knowledge and permission of Taylor Technologies, Inc. The information contained in this sheet is based on lab experience and the most current data available.

Issue date

May 2015

Last revision

May 2015