



SAFETY DATA SHEET

1. Identification

Product identifier	Acid Starch Indicator Powder			
Other means of identification				
Product code	R-0725			
Recommended use	Use as directed by manufacturer for purposes directly related to water testing.			
Recommended restrictions				
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			
Supplier	Refer to Manufacturer			

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. For additional information, refer to section 12 of the SDS.	
OSHA defined hazards	This mixture does not meet the classification criteria according to OSHA HazCom 2012.	
Label elements	 GHS hazard symbol for Corrosion (C), featuring a hand being washed under a stream of liquid.	

Signal word

Danger

Hazard statement

May be corrosive to metals. Causes severe skin burns and eye damage.

Precautionary statement

Prevention

Keep only in original container. Do not breathe dust. Wash skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.

Response

Absorb spillage to prevent material damage.

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 in corrosive-resistant container with a corrosive-resistant inner liner. Store locked up.

Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None
Supplemental information	None

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Sulfamic acid	Amidosulfonic acid	5329-14-6	80
Other components below reportable levels			20

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	<p>Direct skin contact may cause corrosive skin burns, deep ulcerations, and possibly permanent scarring. Direct contact with solid 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. Provide general supportive measures and treat symptomatically.</p> <p>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.</p> <p>Ensure medical personnel are aware of the material(s) involved and take precautions to protect themselves.</p>
Indication of immediate medical attention and special treatment needed	
General information	

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide.
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.
Fire-fighting 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 you can do it 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	No unusual fire or explosion hazards noted
Hazardous combustion products	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 incompatible materials. Observe good industrial hygiene practices. Label containers appropriately.
Conditions for safe storage, including any incompatibilities	Store in original tightly closed container. 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 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.
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	Wear appropriate chemical-resistant gloves. Advice should be sought from glove suppliers.
Hand protection	Wear appropriate chemical-resistant clothing.
Other	In case of insufficient ventilation, wear suitable respiratory equipment. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to fumes at levels exceeding the exposure limits. Advice should be sought from respiratory protection suppliers.
Respiratory protection	When necessary, wear appropriate thermal protective clothing.
Thermal hazards	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.
General hygiene considerations	

9. Physical and chemical properties

Appearance

Physical state	Solid
Form	Powder
Color	Off-white
Odor	Odorless
Odor threshold	Not available
pH	Not applicable
Melting point/freezing point	401°F (205°C)

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	Not available
Solubility(ies)	
Solubility (water)	Soluble in all proportions
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not applicable
Decomposition temperature	Not available
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, and 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	Bromine. Chlorine. Cyanides. Fuming nitric acid. Metal compounds. Oxidizing agents. Reducing agents. Strong bases. Sulfides. Sulfites.
Hazardous decomposition products	Sulfur oxides. Sulfuric acid. Ammonia. Nitrogen. 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	Direct skin contact may cause corrosive skin burns, deep ulcerations, and possibly permanent scarring. Direct contact with solid may be corrosive to the eyes and may cause severe damage, including blindness. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Acute toxicity	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.

This product is not classified as an acute toxicity hazard. See below for individual ingredient acute toxicity data.

Components	Species	Test Results
Sulfamic acid (CAS 5329-14-6)		
Acute		
<i>Dermal</i>		
LD ₅₀	Rabbit	Not available
<i>Inhalation</i>		
LC ₅₀	Rat	Not available
<i>Oral</i>		
LD ₅₀	Rat	3160 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	Not expected to cause chronic effects	

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.
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Components	Species	Test Results
Sulfamic acid (CAS 5329-14-6) – Aquatic		
Acute		
<i>Fish</i>		
LC ₅₀	Fathead minnow (<i>Pimephales promelas</i>)	58.8–84 mg/L, 96 hours 14.2 mg/L, 96 hours
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 in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between 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	UN2967
UN proper shipping name	Sulphamic acid
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, TP1, TP33
Packaging exceptions	154
Packaging, non-bulk	213
Packaging, bulk	240
IATA	
UN number	UN2967
UN proper shipping name	Sulphamic acid
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	UN2967
UN proper shipping name	Sulphamic acid
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





15. Regulatory information

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

One or more components are not listed on the US EPA TSCA Inventory list.

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

Not regulated

CERCLA Hazardous Substance list (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
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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) 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

US state regulations

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

Not regulated

US. Massachusetts RTK - Substance List

Not regulated

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

Sulfamic acid (CAS 5329-14-6)

US. Pennsylvania Worker and Community Right-to-Know Law

Not regulated

US. Rhode Island RTK

Not regulated

US. 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

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