BRYCE LABORATORIES

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SAFETY DATA SHEET

Revision Date: N/A
Date of Preparation: 6 Apr 2017

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Identifier

Product name and code	SULFITE INDICATOR, ACID STARCH (B26091)
Other Means of Identification	-

Relevant Identified Uses and Restrictions

Recommended Use	Field test reagent
Recommended Restrictions	-

Details of Supplier of SDS

Company	**Bryce Laboratories** 2266 Drew Road, #7 Mississauga, Ontario, Canada L5S 1B1
Telephone	905-678-1548
Fax	905-678-1649
Email	sales@bryceindustriesinc.com

Emergency Contact Information

24-Hour Emergency Number (USA)	CHEMTREC (USA) 800-424-9300
24-Hour Emergency Number (Canada)	CANUTEC (Canada) 613-996-6666

Section 2. HAZARDS IDENTIFICATION

Hazard Classification

Physical Hazards	Not classified	
Health Hazards	Skin corrosion & irritation	Category 1A
	Serious eye damage/eye irritation	Category 1

Label Elements

Symbols

Signal word Warning

Hazard Statements
Causes severe skin burns and eye damage.
Dusts cause irritation to the upper respiratory tract.

Precautionary statements

Prevention
Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Use only in a well-ventilated area

Response
Immediately call a POISON CENTER or doctor/physician

Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Skin
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower Wash contaminated clothing before reuse

Eyes	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Ingestion	IF SWALLOWED: Rinse mouth. DO NOT induce vomiting
Storage	Store locked up. Store in a well-ventilated place. Keep container tightly closed
Disposal	Dispose of contents/container to an approved waste disposal plant
Hazards not otherwise classified (HNOC)	None known
Unknown Toxicity	Not Applicable.
OSHA Regulatory Status	This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Section 3. COMPOSITION / INFORMATION ON INGREDIENTS

Components	Common names / synonyms	CAS #	Weight (%)
Sulfamic acid	N/A	5329-14-6	60 - 100

Composition Comments Information for specific product ingredients as required by the WHMIS Regulations is listed. Refer to additional sections of this MSDS for our assessment of the potential hazards of this formulation

Section 4. FIRST AID MEASURES

Description of first aid measures by routes of exposure

Inhalation	Move to fresh air. If breathing stops, provide artificial respiration. For breathing difficulties, oxygen may be necessary. Get medical attention immediately.
Skin contact	Remove contaminated clothing. Wash off with soap and water. Get medical attention if irritation develops and persists. Wash clothing separately before reuse.
Eye contact	Immediately flush eyes with plenty of low-pressure water for at least 30 minutes while removing contact lenses. Keep eyelids apart. Get medical attention immediately.
Ingestion	Do NOT induce vomiting! Do not feed anything by mouth to an unconscious or convulsive victim. Immediately contact a physician. Dilute contents of stomach using 2-8 fluid ounces (60-240ml) of milk or water.

Most important symptoms/ effects (acute and delayed)

Symptoms	Inhalation of dusts may cause irritation and/or burns to respiratory tract. Skin contact may cause moderate irritation to burns (dependant on length of exposure).

Indication of immediate medical attention, and special treatment if needed

Notes to Physician	No special instructions

Section 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable extinguishing media	Dry chemical, CO2, water spray or regular foam
Unsuitable extinguishing media	No information available.

Specific hazards arising from the Chemical

Specific hazards arising from the Chemical	No information available
Hazardous Combustion Products	Not available

Special protective equipment and precautions for firefighters	equipment/instructions Fire fighters should wear positive pressure self-contained breathing apparatus (full face-piece type).
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No information available

Section 6. ACCIDENTAL RELEASE MEASURES

Procedures to be followed in case of a leak or a spill

Personal precautions, protective equipment and emergency procedures	Use personal protective equipment. Wear self-contained breathing apparatus and protective suit. Evacuate personnel to safe areas. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing.
Methods and materials for containment and cleaning up	Ventilate the area. Soak up with inert absorbent material. Place in waste disposal container. Flush area with water. Wet area may be slippery. Spread sand/grit.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
Other Information	Not applicable.

Section 7. HANDLING AND STORAGE

Precautions for safe handling

Handling procedures and equipment	Corrosive to the eyes Normal chemical handling.

Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area.
Incompatible materials	-

Section 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

Control Parameters: Occupational exposure limits

Biological limit values	No biological exposure limits noted for the ingredient(s).
Occupational exposure limits	No exposure limits for ingredients

Appropriate engineering controls	Use under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
Skin and body protection	Neoprene gloves. Wash off after each use. Replace as necessary
Respiratory protection	If air-purifying respirator use is appropriate, use any of the following particulate respirators: N95, N99, N100, R95, R99, R100, P95, P99 or P100.
General Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	
Physical State	Solid
Colour	White
Odour	Odorless
Odour Threshold	Not applicable
pH	2
Melting point & Freezing point	No data available
Initial boiling point & Boiling range	No information available.
Flash point	> 200 °F (> 93 °C) P-M(CC)

Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	No data available
Flammability limit – upper (%)	No data available
Vapor pressure	Not available.
Vapor density	(Air = 1)
Relative density	Not available.
Solubility (water)	< 5 %
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.

Evaporation rate	< 1 (ether = 1)	**Decomposition temperature**	Not available.
Flammability (solid, gas)	No information available	**Viscosity temperature**	70 °F (21 °C)
Specific Gravity		**Molecular Formula**	
		Molecular Weight	

Section 10. STABILITY AND REACTIVITY

Reactivity hazards No information available

Chemical stability

Conditions under which the product is chemically stable Material is stable under normal conditions.

Possibility of hazardous reactions

Conditions of reactivity Hazardous polymerization does not occur.

Conditions to avoid

Conditions under which the product is chemically unstable Avoid contact with strong bases.

Incompatible materials Strong oxidizing substances.

Hazardous decomposition products Not available

Hazardous Polymerization Hazardous polymerization does not occur.

Section 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation Dusts cause irritation to the upper respiratory tract.

Skin contact Primary route of exposure Irritating to skin.

Eye contact Corrosive.

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Symptoms related to physical, chemical and toxicological characteristics

Symptoms Inhalation of dusts may cause irritation and/or burns to respiratory tract. Skin contact may cause moderate irritation to burns (dependant on length of exposure).

Numerical Measures of Toxicity (such as Acute Toxicity Estimates)

Acute toxicity

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
SULFITE INDICATOR, ACID-STARCH (CAS Mixture)	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	Not listed
Sulfamic Acid (CAS 5329-14-6)	3160 mg/kg (Rat)	Not listed	Not listed

Toxicologically Synergistic Products No information available

Delayed and immidate effects and also chronic effects from short- and long-term exposure

Skin corrosion/irritation No information available

Sensitization No information available

Reproductive toxicity No information available.

Mutagenic Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

Specific target organ toxicity - single exposure No information available

Specific target organ toxicity - repeated exposure None known.

Aspiration hazard No information available.

Symptoms/Effects, both acute and delayed No information available

Endocrine Disruptor Information No information available

Other Adverse Effects	The toxicological properties have not been fully investigated.. See actual entry in RTECS for complete information.
Carcinogenicity	No information available

Section 12. ECOLOGICAL INFORMATION

Ecotoxicity	No ecotoxicity data noted for the ingredient(s).
Bioaccumulation / accumulation potential	No information available
Mobility in soil	No data available.
Persistence and degradability	No information available.
Other adverse effects.	No information available.

Section 13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods

Disposal instructions: Dispose of contents/container in accordance with local/regional/national/international regulations.
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.
Contaminated packaging: Via an authorized waste disposal contractor to an approved waste disposal site, observing all local and national regulations.

Section 14. TRANSPORT INFORMATION

DOT

UN number	UN2967
UN proper shipping name	SULPHAMIC ACID
Proper Technical Name	
Hazard Class	8
Packing group	III
Environmental hazards	Not available
Transportation in bulk, if applicable	-
Special Precautions	-
ERG code	154

TDG

UN number	UN2967
UN proper shipping name	SULPHAMIC ACID
Proper Technical Name	
Hazard Class	8
Packing group	III
Environmental hazards	Not available
Transportation in bulk, if applicable	-
Special Precautions	-

IATA

UN number	UN2967
UN proper shipping name	SULPHAMIC ACID
Proper Technical Name	
Hazard Class	8
Packing group	III
Environmental hazards	Not available

Transportation in bulk, if applicable -

Special Precautions

IMDG/IMO

UN number	UN2967
UN proper shipping name	SULPHAMIC ACID
Proper Technical Name	
Hazard Class	8
Packing Group	III
Environmental hazards	No.
Transportation in bulk, if applicable	-
Special Precautions	Not available
EmS	Not available

Section 15. REGULATORY INFORMATION

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

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

Canadian regulations This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

Mexican Regulations No information available

US federal regulations

Other Regulations

HMIS

HMIS	vII CODE	TRANSLATION
Health	3	Serious Hazard
Fire	0	Slight Hazard
Reactivity	0	Minimal Hazard
Special	NONE	No Special Hazard
Protective Equipment (1)	B	Goggles, Gloves

(1) refer to section 8 of SDS for additional protective equipment recommendations

NFPA

Health	Flammability	Instability	Physical hazards
3	1	0	N/A

Section 16. OTHER INFORMATION INCLUDING DATE OF PREPARATION OR LAST REVISION

List of abbreviations

CAS: Chemical Abstract Service Registration Number
TSRN indicates a Trade Secret Registry Number is used in place of the CAS number.
ACGIH: American Conference of Governmental Industrial Hygienists
NOEL: No Observed Effect Level
STEL: Short Term Exposure Limit
LC50: Lethal Concentration, 50%
TWA: Time Weighted Average

BOD: Biochemical Oxygen Demand
COD: Chemical Oxygen Demand
TOC: Total Organic Carbon
IATA: International Air Transport Association
IMDG: International Maritime Dangerous Goods Code
TLV: Threshold Limit Value
LD50: Lethal Dose, 50%
NFPA: National Fire Protection Association

Revision Date: N/A

Revision Summary
This document has been prepared to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200, as well as the Hazardous Products Regulations (HPR) to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer
The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

References: No data available

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Legend:
NA - Not Applicable w/w - weight/weight
ND - Not Determined w/v - weight/volume
NV - Not Available v/v - volume/volume

Ref.: CT 4/6/2017

FOOTNOTES
This information is furnished without warranty, representation, or license of any kind, except that it is accurate to the best of Bryce Laboratories' knowledge or obtained from sources believed by Bryce Laboratories to be accurate. Bryce Laboratories does not assume any legal responsibility for use or reliance upon same. Customers are encouraged to conduct their own tests. Before using any product, read its label.

END OF SDS