SAFETY DATA SHEET

according to US Regulation 29 CFR 1910.1200 and the Canadian HPA

APPLIED BIOCHEMISTS STAINTRINE

Version 1.0 Revision Date 2019.02.14 Print Date 2019.11.12

SECTION 1. IDENTIFICATION

Product name : APPLIED BIOCHEMISTS STAINTRINE

Manufacturer or supplier's details

Company : Arch Chemicals, Inc.
1200 Bluegrass Lakes Parkway
Alpharetta, GA
30004
United States of America (USA)

E-mail address : sds@lonza.com

Emergency telephone number : In case of emergency call CHEMTREC US: 1-800-424-9300, CHEMTREC WORLD-WIDE: +1-703-527-3887.

Recommended use of the chemical and restrictions on use

Recommended use : Water treatment chemical

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Corrosive to metals : Category 1

Skin irritation : Category 2

Serious eye damage : Category 1

Specific target organ toxicity - single exposure : Category 3 (Respiratory system)

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H290 May be corrosive to metals.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.

Precautionary statements : **Prevention:**
P234 Keep only in original container.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.

P280 Wear eye protection/ face protection.
P280 Wear protective gloves.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P390 Absorb spillage to prevent material damage.
Storage:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P406 Store in corrosive resistant stainless steel container with a resistant inner liner.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature : Mixture

Hazardous components

Chemical name / Synonyms	CAS-No.	Concentration (% w/w)
Etidronic acid	2809-21-4	10 - 15
2-Phosphonobutane-1,2,4-tricarboxylic acid	37971-36-1	1 - 3

SECTION 4. FIRST AID MEASURES

If inhaled : IF INHALED: Remove individual to fresh air.
Seek medical attention if breathing becomes difficult or if respiratory irritation develops.

In case of skin contact : IF ON SKIN: Immediately flush skin with plenty of water for 15 minutes. If clothing comes in contact with the product, the clothing should be removed immediately and laundered before re-use. Seek medical attention if irritation develops.

In case of eye contact : IF IN EYES: Immediately flush eyes with plenty of water for at least 15 minutes.
Seek medical attention immediately.

If swallowed : IF SWALLOWED: Call a physician immediately. DO NOT induce vomiting unless directed to do so by a physician. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed	:	None known.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Choose extinguishing media suitable for surrounding materials.
Specific hazards during firefighting	:	This material is not expected to burn unless all the water is boiled away. The remaining compounds may be ignitable.
Further information	:	In case of fire, use normal fire-fighting equipment and the personal protective equipment recommended in Section 8 to include a NIOSH approved self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use the personal protective equipment recommended in Section 8 and a NIOSH approved self-contained breathing apparatus. Stop source of spill as soon as possible and notify appropriate personnel. Utilize emergency response personal protection equipment prior to the start of any response. Evacuate all non-essential personnel. Dispose of spill residues per guidelines under Section 13, Disposal Consideration.
Environmental precautions	:	If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Do not flush into surface water or sanitary sewer system.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	:	Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash off with water. Avoid breathing mist or vapor.
Conditions for safe storage	:	Store in a cool dry ventilated location, away from sources of ignition or other incompatible conditions and chemicals. Keep container(s) closed. Avoid freezing.
Materials to avoid	:	Refer to Section 10, "Incompatible Materials."

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
2-Phosphonobutane-1,2,4-tricarboxylic acid	37971-36-1	TWA (Aerosols)	10 mg/m3 (as PBTC)	WEEL

Engineering measures : Local exhaust ventilation or other engineering controls are normally required when handling or using this product to keep airborne exposures below the TLV, PEL or other recommended exposure limit.

Personal protective equipment

Respiratory protection : Wear a NIOSH approved respirator if levels above the exposure limits are possible.
A NIOSH approved full-face or half-face respirator in combination with chemical goggles.
A NIOSH approved air purifying respirator with P100 filter. Air purifying respirators should not be used in oxygen deficient or IDLH atmospheres or if exposure concentrations exceed ten (10) times the published limit.

Hand protection

Remarks : Avoid contact with skin. Impervious gloves

Eye protection : Use chemical goggles and a faceshield.

Skin and body protection : Impervious

Protective measures : Ensure that eyewash stations and safety showers are close to the workstation location.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : no data available

Odour : no data available

Odour Threshold : no data available

pH : 1.0 - 3.0

Melting point/freezing point : no data available

Boiling point/boiling range : 215.1 °F / 101.7 °C

Flash point : no data available

Evaporation rate	:	no data available
Flammability (solid, gas)	:	Product is not known to be flammable, combustible, pyrophoric or explosive.
Flammability (liquids)	:	no data available
Upper explosion limit	:	no data available
Lower explosion limit	:	no data available
Vapour pressure	:	no data available
Relative vapour density	:	no data available
Relative density	:	1.1 - 1.3 (68 °F / 20 °C)
Density	:	Not applicable
Bulk density	:	no data available
Water solubility	:	soluble in cold water
Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	no data available
Decomposition temperature	:	no data available
Viscosity, dynamic	:	no data available
Viscosity, kinematic	:	no data available

SECTION 10. STABILITY AND REACTIVITY

Possibility of hazardous reactions	:	Stable under normal conditions.
Conditions to avoid	:	Sparks, open flame, other ignition sources, and elevated temperatures. Avoid freezing.
Incompatible materials	:	Strong oxidizing agents Bases Metals
Hazardous decomposition products	:	Carbon monoxide, Carbon dioxide Oxides of nitrogen Phosphines may form after all water has been removed.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	Inhalation, skin, eyes, ingestion

Acute toxicity

Acute oral toxicity	:	LD50 (Rat): Believed to be > 9,000 mg/kg
Acute dermal toxicity	:	LD50 (Rabbit): Believed to be > 4,000 mg/kg
Acute toxicity (other routes of administration)	:	Remarks: This product is corrosive to the eyes, moderately irritating to the skin and upon inhalation, may cause irritation to mucous membranes and respiratory tract.

Skin corrosion/irritation

Remarks: This material is expected to be moderately irritating.

Serious eye damage/eye irritation

Remarks: May cause irreversible eye damage.

Respiratory or skin sensitisation

Remarks: This material is not known or reported to be a skin or respiratory sensitizer. The active ingredient in this product tested negative for skin sensitization in laboratory animals.

Carcinogenicity

IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
ACGIH	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Repeated dose toxicity

Remarks: High oral exposure of a similar chemical to laboratory rodents has been shown to alter red and white cell count, decrease hemoglobin concentration and decrease the hematocrit value. This effect to blood occurred when they were fed a diet containing 3% HEDP-A. No effect was observed at a dietary concentration of 1%.
The hematological effects observed in laboratory studies using rodents would be unlikely to occur in humans because of the high dose required.

Further information

Remarks: no data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

no data available

Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil
no data available

Other adverse effects

Ozone-Depletion Potential	:	Regulation: US. EPA Clean Air Act (CAA) Section 602 Ozone-Depleting Substances (40 CFR 82, Subpt. A, App A & B) Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
Additional ecological information	:	Practically non- toxic to fish and other aquatic organisms.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	If this product becomes a waste, it will be a hazardous waste which is subject to the Land Disposal restrictions under 40 CFR 268 and must be managed accordingly. As a hazardous liquid waste it must be disposed of in accordance with local, state and federal regulations.

SECTION 14. TRANSPORT INFORMATION

DOT

UN number	:	3265
Proper shipping name	:	Corrosive liquid, acidic, organic, n.o.s. (1-Hydroxyethylidene-1,1-diphosphonic acid)
Transport hazard class	:	8
Packing group	:	III
Labels	:	8
Emergency Response Guidebook Number	:	153
Environmental hazards	:	no

TDG

UN number	:	3265
Proper shipping name	:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (1-Hydroxyethylidene-1,1-diphosphonic acid)
Transport hazard class	:	8
Packing group	:	III
Labels	:	8
Environmental hazards	:	no

IATA

UN number	:	3265
Proper shipping name	:	Corrosive liquid, acidic, organic, n.o.s. (1-Hydroxyethylidene-1,1-diphosphonic acid)
Transport hazard class	:	8
Packing group	:	III
Labels	:	8
Environmental hazards	:	no

IMDG

UN number	:	3265
Proper shipping name	:	Corrosive liquid, acidic, organic, n.o.s. (1-Hydroxyethylidene-1,1-diphosphonic acid)
Transport hazard class	:	8
Packing group	:	III
Labels	:	8
EmS Number 1	:	F-A
EmS Number 2	:	S-B
Environmental hazards	:	Marine pollutant: no

ADR

UN number	:	3265
Proper shipping name	:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (1-Hydroxyethylidene-1,1-diphosphonic acid)
Transport hazard class	:	8
Packing group	:	III
Classification Code	:	C3
Hazard Identification Number	:	80
Labels	:	8
Environmental hazards	:	no

RID

UN number	:	3265
Proper shipping name	:	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (1-Hydroxyethylidene-1,1-diphosphonic acid)
Transport hazard class	:	8
Packing group	:	III
Classification Code	:	C3
Hazard Identification Number	:	80
Labels	:	8
Environmental hazards	:	no
Special precautions for user	:	none
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	:	Not applicable

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards

See above: SECTION 2. Hazard Identification-GHS Classification

SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

This product does not contain any VOC exemptions listed under the U.S. Clean Air Act Section 450.

Clean Water Act

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

US State Regulations

Massachusetts Right To Know

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know

Components	CAS-No.
Etidronic acid	2809-21-4

New Jersey Right To Know

Components	CAS-No.
Etidronic acid	2809-21-4
2-Phosphonobutane-1,2,4-tricarboxylic acid	37971-36-1

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Canadian lists

NPRI

Canadian National Pollutant Release Inventory (NPRI): No component is listed on NPRI.

The components of this product are reported in the following inventories:

TSCA : The components of this product are listed on the TSCA Inventory of Existing Chemical Substances.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

WEEL : US. AIHA Workplace Environmental Exposure Level (WEEL) Guides

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substanc-

es (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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The information provided in 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 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.

Date format : yyyy/mm/dd

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