SAFETY DATA SHEET
BIO-ENZYME LAUNDRY DETERGENT

Revision: 2022-08-26:

SECTION 1: IDENTIFICATION

Product identifier

Product Name	**BIO-ENZYME LAUNDRY DETERGENT**
Authorization number	0280-CL5 (F220-001)
Recommended Use	Laundry detergent
Uses advised against	Restrictions on use: Do not use in any fashion not specified on the product label.

Manufacturer/Supplier

Alco Chem, Inc.
45 N. Summit St.
Akron Ohio 44308
United States

Telephone: 1.800.589.2526

Emergency telephone number	800-424-9300
National poison center	800-222-1222

SECTION 2: HAZARD(S) IDENTIFICATION

Classification acc. to GHS

Skin corrosion/irritation.	H315.
Serious eye damage/eye irritation.	H319.

Label elements

Signal word Warning

Pictograms

Hazard statements

Causes skin irritation.
Causes serious eye irritation.

Precautionary statements

Wear protective gloves.
If on skin: Wash with plenty of water.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Specific treatment (see on this label).
If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.

Hazardous ingredients for labelling Benzisothiazolinone

Other hazards

Hazards not otherwise classified

Toxic to aquatic life with long lasting effects (GHS category 2: aquatic toxicity - acute and/or chronic).

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Name of substance	Identifier	Wt%
Alkylbenzene Sulfonic Acid	CAS No 68584-22-5	5 – < 10
Sodium Hydroxide	CAS No 1310-73-2	1 – < 5
Sulfuric Acid	CAS No 7664-93-9	< 1
Benzisothiazolinone	CAS No 2634-33-5	< 1

For full text of abbreviations: see SECTION 16.

SECTION 4: FIRST-AID MEASURES

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

Indication of any immediate medical attention and special treatment needed

none

SECTION 5: FIRE-FIGHTING MEASURES

Suitable extinguishing media

Water spray, BC-powder, Carbon dioxide (CO2)

Unsuitable extinguishing media

Water jet

Special hazards arising from the substance or mixture

Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO2)

Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Coordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

Conditions for safe storage, including any incompatibilities

Protect against external exposure, such as

frost

See section 16 for a general overview.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid
Color	Dark blue
Odor	Tropical
pH (value)	7 – 8
Melting point/freezing point	Not determined
Evaporation rate	Not determined
Flammability (solid, gas)	Not relevant (fluid)
Density	Not determined
Relative density	1.025 – 1.065 at 20 °C (water = 1)

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

Chemical stability

See below "Conditions to avoid".

Possibility of hazardous reactions

No known hazardous reactions.

Conditions to avoid

There are no specific conditions known which have to be avoided.

Incompatible materials

Oxidizers

Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Acute toxicity

Shall not be classified as acutely toxic.

Acute toxicity estimate (ATE) of components of the mixture

Name of substance	CAS No	Exposure route	ATE
Alkylbenzene Sulfonic Acid	68584-22-5	inhalation: vapor	11 $^{mg}/_{l}$/4h
Alkylbenzene Sulfonic Acid	68584-22-5	inhalation: dust/mist	>1.9 $^{mg}/_{l}$/4h
Sulfuric Acid	7664-93-9	inhalation: vapor	3 $^{mg}/_{l}$/4h
Sulfuric Acid	7664-93-9	inhalation: dust/mist	0.85 $^{mg}/_{l}$/4h
Benzisothiazolinone	2634-33-5	oral	500 $^{mg}/_{kg}$

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitization

Shall not be classified as a respiratory or skin sensitizer.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

Name of substance	CAS No	Classification	Number
Sulfuric Acid	7664-93-9	1	

Legend

1 Carcinogenic to humans

National Toxicology Program (United States): Report on Carcinogens

Name of substance	CAS No	Classification	Number
Sulfuric Acid	7664-93-9	Known to be a human carcinogen	9th Report on Carcinogens

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity

Toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Alkylbenzene Sulfonic Acid	68584-22-5	LL50	>10,000 $^{mg}/_{l}$	fish	96 h
Alkylbenzene Sulfonic Acid	68584-22-5	EC50	>1,000 $^{mg}/_{l}$	aquatic invertebrates	48 h
Alkylbenzene Sulfonic Acid	68584-22-5	ErC50	>1,000 $^{mg}/_{l}$	algae	72 h
Sodium Hydroxide	1310-73-2	EC50	40.4 $^{mg}/_{l}$	aquatic invertebrates	48 h
Sulfuric Acid	7664-93-9	EC50	>100 $^{mg}/_{l}$	aquatic invertebrates	48 h
Sulfuric Acid	7664-93-9	ErC50	>100 $^{mg}/_{l}$	algae	72 h

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Alkylbenzene Sulfonic Acid	68584-22-5	EC50	≤5,000 $^{mg}/_{l}$	microorganisms	8 h

Persistence and degradability

Data are not available.

Bioaccumulative potential

Data are not available.

Mobility in soil

Data are not available.

Results of PBT and vPvB assessment

Data are not available.

Endocrine disrupting properties

None of the ingredients are listed.

Other adverse effects

Data are not available.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packages

Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: TRANSPORT INFORMATION

UN number not subject to transport regulations

UN proper shipping name	not relevant
Transport hazard class(es)	not assigned
Packing group	not assigned
Environmental hazards	non-environmentally hazardous acc. to the dangerous goods regulations

Not subject to transport regulations.

Not subject to IMDG.

Not subject to ICAO-IATA.

SECTION 15: REGULATORY INFORMATION

National regulations (United States)

Superfund Amendment and Reauthorization Act (SARA TITLE III)

- The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

The List of Extremely Hazardous Substances and Their Threshold Planning Quantities

Name of substance	CAS No	Notes	Reportable quantity (pounds)	Threshold planning quantity (pounds)
Sulfuric Acid	7664-93-9		1,000	1000

- Specific Toxic Chemical Listings (EPCRA Section 313)

Toxics Release Inventory: Specific Toxic Chemical Listings

Name of substance	CAS No	Remarks	Effective date
Sulfuric Acid	7664-93-9	acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size	1987-01-01

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

- List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

Name of substance	CAS No	Remarks	Statutory code	Final RQ pounds (Kg)
Sulfuric Acid	7664-93-9		1	1000 (454)
Sodium Hydroxide	1310-73-2		1	1000 (454)

Legend
1 "1" indicates that the statutory source is section 311(b)(2) of the Clean Water Act

Clean Air Act

none of the ingredients are listed

Right to Know Hazardous Substance List

- Cleaning Product Right to Know Act Substance List (CA-RTK)

Name of substance	CAS No	Functionality	Authoritative Lists
Sodium Hydroxide	1310-73-2		OEHHA RELs
Sulfuric Acid	7664-93-9		IARC Carcinogens - 1 NTP 13th RoC - known OEHHA RELs Prop 65

- Toxic or Hazardous Substance List (MA-TURA)

Name of substance	CAS No	DEP CODE	PBT / HHS / LHS	PBT / HHS Threshold	De Minimis Concentration Threshold
Sulfuric Acid	7664-93-9				1.0 %
Sodium Hydroxide	1310-73-2				1.0 %

- Hazardous Substances List (MN-ERTK)

Name of substance	CAS No	References	Remarks
Sodium Hydroxide	1310-73-2	A, N, O	

Legend

A	American Conference of Governmental Industrial Hygienists (ACGIH), "Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices for 1992-93", available from ACGIH
N	National Institute for Occupational Safety and Health (NIOSH), "Recommendations for Occupational Safety and Health Standards," August 1988, available from NIOSH, Publications Dissemination Office, Division of Standards Development and Technology Transfer
O	Occupational Safety and Health Administration (OSHA), Safety and Health Standards, Code of Federal Regulations, title 29, part 1910, subpart Z, "Toxic and Hazardous Substances, 1990." General information: Minnesota Department of Labor and Industry, Occupational Safety and Health Division

- Hazardous Substance List (NJ-RTK)

Name of substance	CAS No	Remarks	Classifications
Sulfuric Acid	7664-93-9		CA CO R2
Sodium Hydroxide	1310-73-2		CO R1

Legend

CA	Carcinogenic
CO	Corrosive
R1	Reactive - First Degree
R2	Reactive - Second Degree

- Hazardous Substance List (Chapter 323) (PA-RTK)

Name acc. to inventory	CAS No	Classification
SULFURIC ACID	7664-93-9	E
SODIUM HYDROXIDE (NA(OH))	1310-73-2	E

Legend

E	Environmental hazard

- Hazardous Substance List (RI-RTK)

Name of substance	CAS No	References
Sulfuric Acid	7664-93-9	T, F
Sodium Hydroxide	1310-73-2	T, F

Legend
F Flammability (NFPA®)
T Toxicity (ACGIH®)

NPCA-HMIS® III

Category	Rating	Description
Chronic	*	chronic (long-term) health effects may result from repeated overexposure
Health	2	temporary or minor injury may occur
Flammability	1	material that must be preheated before ignition can occur
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	

NFPA® 704

Category	Degree of hazard	Description
Flammability	1	material that must be preheated before ignition can occur
Health	2	material that, under emergency conditions, can cause temporary incapacitation or residual injury
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

National inventories

Country	Inventory	Status
EU	REACH Reg.	not all ingredients are listed
US	TSCA	not all ingredients are listed

Legend
REACH Reg. REACH registered substances
TSCA Toxic Substance Control Act

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.
Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H315	Causes skin irritation.
H319	Causes serious eye irritation.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product. Disclaimer: No representation or warranty, either expressed or implied, of merchantability, fitness for a particular purpose, or of any other nature, is made with respect to information concerning the product referred to in this document. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, it is impossible to foresee every health effect or exposure risk incurred by the use of this product. All chemicals present some degree of hazard and should be used with caution. The information and recommendations contained herein are presented in good faith. The user should review this information in conjunction with their knowledge of the application intended to determine the suitability of this product for such purpose. In no event will the supplier be responsible for any damages of any nature whatsoever, resulting from the use, reliance upon, or the misuse of this information. Furthermore, it is the direct responsibility of the user to comply with all applicable regulations governing the use and disposal of this material. .