

MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS NAME Acrylamide Solution
CATALOG NUMBER BAC-30--BAC40
COMPANY IDENTIFICATION: BOSTON BIOPRODUCTS, INC.
9 SHORT STREET, WORCESTER, MA 01604

ACRYLAMIDE / BIS, 30- 40% SOLUTION

1. Product Identification

Synonyms: None

CAS No.: Not applicable to mixtures.

Molecular Weight: Not applicable to mixtures.

Chemical Formula: Not applicable to mixtures.

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Acrylamide	79-06-1	28-38%	Yes
N, N'-Methylenebisacrylamide	110-26-9	1.33-2%	Yes
Water	7732-18-5	60%	No

3. Hazards Identification

Emergency Overview

WARNING! HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. AFFECTS CENTRAL AND PERIPHERAL NERVOUS SYSTEMS AND REPRODUCTIVE SYSTEM. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. SUSPECT CANCER HAZARD. CONTAINS ACRYLAMIDE WHICH MAY CAUSE CANCER. Risk of cancer depends on level and duration of exposure. POSSIBLE BIRTH DEFECT HAZARD. MAY CAUSE BIRTH DEFECTS BASED ON ANIMAL DATA.

Health Rating: 3 - Severe (Cancer Causing)

Flammability Rating: 0 - None

Reactivity Rating: 2 - Moderate

Contact Rating: 3 - Severe (Life)

Lab Protective Equip: GOGGLES; LAB COAT; PROPER GLOVES

Potential Health Effects

Inhalation:

May cause drowsiness, tingling sensations, fatigue, weakness, stumbling, slurred speech, and shaking. May cause central and peripheral nervous system damage. Severe intoxications may cause permanent nerve damage. Causes irritation to the respiratory tract. May affect reproductive system and act as a teratogen.

Ingestion:

Toxic! May cause systemic poisoning with symptoms paralleling those of inhalation.

Skin Contact:

Causes irritation to skin. Symptoms include redness, itching, and pain. May be absorbed through the skin with possible systemic effects.

Eye Contact:

Causes irritation, redness, and pain.

Chronic Exposure:

Prolonged or repeated exposure through any route may cause muscular weakness, incoordination, skin rashes, excessive sweating of hands and feet, cold hands, peeling of the skin, numbness, abnormal skin or muscle sensations, fatigue, and cause central and peripheral nervous system damage. Suspect cancer hazard. May cause cancer. May affect the reproductive system and act as a teratogen.

Aggravation of Pre-existing Conditions:

Persons with pre-existing skin disorders, eye problems or central or peripheral nervous system conditions may be more susceptible to the effects of this substance.

4. First Aid Measures

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion:

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

Skin Contact:

Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eye Contact:

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. Fire Fighting Measures

Fire:

Flash point: 138C (280F) CC

Autoignition temperature: 240C (464F)

Fire data for concentrated acrylamide.

Explosion:

For pure acrylamide: Not considered an explosive hazard, but an explosion may occur upon polymerization.

Fire Extinguishing Media:

Water spray, dry chemical, alcohol foam, or carbon dioxide. Water spray may be used to keep fire exposed containers cool.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities.

7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Material is hygroscopic. Isolate from any source of heat or ignition. Isolate from oxidizing materials and peroxides. Store away from acids and alkalis. Protect from direct sunlight. Wear special protective equipment (Sec. 8) for maintenance break-in or where exposures may exceed established exposure levels. Wash hands, face, forearms and neck when exiting restricted areas. Shower, dispose of outer clothing, change to clean garments at the end of the day. Avoid cross-contamination of street clothes. Wash hands before eating and do not eat, drink, or smoke in workplace. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:

Acrylamide:

-OSHA Permissible Exposure Limit (PEL):

0.3 mg/m³ (TWA) (skin)

-ACGIH Threshold Limit Value (TLV):

0.03 mg/m³ (TWA) (skin)

Listed as A3, animal carcinogen

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

If the exposure limit is exceeded, a half-face organic vapor respirator may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece organic vapor respirator may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres. This compound possibly exists in both particulate and vapor phase. A gas/vapor cartridge should be used in addition to the particulate filter. If the vapor concentration alone exceeds the exposure limits, use a supplied air respirator, because warning properties are unknown for these compounds.

Skin Protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection:

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Other Control Measures:

Weekly examinations for skin peeling of hands and fingers. Comments: Stress good personal cleanliness and housekeeping to prevent skin contact. Wear clean work clothing daily. Do not home launder. If clothes become contaminated, remove at once, wash the skin with soap and water and launder clothing before reuse. Destroy contaminated leather goods.

9. Physical and Chemical Properties

Appearance: Clear, colorless liquid.

Odor: Odorless.

Solubility: Soluble in water.

Specific Gravity: No information found.

pH: No information found.

% Volatiles by volume @ 21C (70F): No information found.

Boiling Point: No information found.

Melting Point: No information found.

Vapor Density (Air=1): No information found.

Vapor Pressure (mm Hg): No information found.

Evaporation Rate (BuAc=1): No information found.

10. Stability and Reactivity

Stability:

Stable under ordinary conditions of use and storage. For solid acrylamide: May polymerize explosively. Thermally unstable. Polymerization may be caused by exposure to heat, U.V. light, oxidizers, or peroxides. May be stabilized with hydroquinone, t-butylpyrocatechol, N-phenyl-2-naphthylamine, or other antioxidants.

Hazardous Decomposition Products:

Burning may produce ammonia, carbon monoxide, carbon dioxide, nitrogen oxides.

Hazardous Polymerization: May occur.

Incompatibilities:

Acids, oxidizing agents, and bases. Spontaneously reacts with hydroxyl-, amino-, and sulfhydryl- containing compounds. Avoid vinyl polymerization initiators or contamination with aluminum, iron, copper, brass and bronze.

Conditions to Avoid:

Heat, shock, UV light, ignition sources, and incompatibles.

11. Toxicological Information

Toxicological Data:

For Acrylamide: oral rat LD50: 124 mg/kg; skin rabbit LD50: 1680 uL/kg. Investigated as a tumorigen, mutagen,

reproductive effector. N, N'-Methylenebisacrylamide: Oral rat LD50: 390 mg/kg; investigated as a mutagen, reproductive effector.

Reproductive Toxicity:

See Chronic Health Hazards.

Cancer Lists\

Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
Acrylamide (79-06-1)	No	Yes	2A
N, N'-Methylenebisacrylamide (110-26-9)	No	No	None
Water (7732-18-5)	No	No	None

12. Ecological Information

Environmental Fate:

For pure acrylamide: When released into the soil, this material is expected to leach into groundwater. When released into the soil, this material may biodegrade to a moderate extent. This material is not expected to significantly bioaccumulate. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet deposition.

Environmental Toxicity:

For pure acrylamide: This material is not expected to be toxic to aquatic life. The LC50/96-hour values for fish are over 100 mg/l.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Domestic (Land, D.O.T.)

Proper Shipping Name: TOXIC LIQUID, ORGANIC, N.O.S. (ACRYLAMIDE)

Hazard Class: 6.1

UN/NA: UN3420

Packing Group: III

Information reported for product/size: 500ML

International (Water, I.M.O.)

Proper Shipping Name: TOXIC LIQUID, ORGANIC, N.O.S. (ACRYLAMIDE)

Hazard Class: 6.1

UN/NA: UN3420

Packing Group: III

Information reported for product/size: 500ML

International (Air, I.C.A.O.)

Proper Shipping Name: TOXIC LIQUID, ORGANIC, N.O.S. (ACRYLAMIDE)

Hazard Class: 6.1

UN/NA: UN3420

Packing Group: III

Information reported for product/size: 500ML

15. Regulatory Information

Chemical Inventory Status - Part 1

Ingredient	TSCA	EC	Japan	Australia
Acrylamide (79-06-1)	Yes	Yes	Yes	Yes

N,N'-Methylenebisacrylamide (110-26-9)	Yes	Yes	Yes	Yes
Water (7732-18-5)	Yes	Yes	Yes	Yes

Chemical Inventory Status - Part 2

WARNING:

THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

Australian Hazchem Code: None allocated.

Poison Schedule: None allocated.

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

16. Other Information

NFPA Ratings: Health: 2 Flammability: 1 Reactivity: 1

Label Hazard Warning:

WARNING! HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH SKIN. AFFECTS CENTRAL AND PERIPHERAL NERVOUS SYSTEMS AND REPRODUCTIVE SYSTEM. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. SUSPECT CANCER HAZARD. CONTAINS ACRYLAMIDE WHICH MAY CAUSE CANCER. Risk of cancer depends on level and duration of exposure. POSSIBLE BIRTH DEFECT HAZARD. MAY CAUSE BIRTH DEFECTS BASED ON ANIMAL DATA.

Label Precautions:

- Do not breathe vapor.
- Do not get in eyes, on skin, or on clothing.
- Keep container closed.
- Use only with adequate ventilation.
- Wash thoroughly after handling.

Label First Aid:

If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. In all cases, get medical attention.

Product Use:

Electrophoresis.

Revision Information:

No Changes.

Disclaimer:

Boston BioProducts. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. For any other information please contact us at 508-756-6677

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