

Material Safety Data Sheet

Bis-Acrylamide

ACC# 16077

Section 1 - Chemical Product and Company Identification

MSDS Name: Bis-Acrylamide**Catalog Numbers:** AC163800000, AC163800050, AC163801000, AC163805000, AC164790000, AC164795000, 16479-0250, 16479-1000, BP171-100, BP171-25**Synonyms:** N,N'-Methylenebis(acrylamide); N,N'-Methylenebis(2-propenamamide); Methylene diacrylamide; Methylenebisacrylamide; MBA; Bisacrylamide; BAC; cross-linking agent.**Company Identification:**

Fisher Scientific

1 Reagent Lane

Fair Lawn, NJ 07410

For information, call: 201-796-7100**Emergency Number:** 201-796-7100**For CHEMTREC assistance, call:** 800-424-9300**For International CHEMTREC assistance, call:** 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
110-26-9	N,N'-Methylenebis(acrylamide)	>95	203-750-9

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: white solid.

Warning! Harmful if swallowed. Causes eye, skin, and respiratory tract irritation. May be harmful if absorbed through skin or if inhaled. May cause nervous system effects. Light sensitive. Refrigerate upon arrival below 4°C/39°F. May cause adverse reproductive effects based upon animal studies.

Target Organs: Eyes, nervous system, reproductive system, skin.

Potential Health Effects

Eye: Causes eye irritation.

Skin: Causes skin irritation. May be absorbed through the skin.

Ingestion: Harmful if swallowed. May cause irritation of the digestive tract. Like acrylamide, may cause central, peripheral, and autonomic nervous system effects.

Inhalation: Causes respiratory tract irritation. Acrylamide, a similar compound, can be absorbed through the lungs and overexposure will produce signs of neurotoxicity. Inhalation studies with methylenebisacrylamide have produced acute pulmonary edema in animals.

Chronic: Adverse reproductive effects have been reported in animals. Prolonged or repeated exposure affects the nervous system.

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

Skin: In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

Ingestion: If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

Antidote: Pyridoxine (vitamin B6), pyruvate, and N-acetylcysteine have been used to reduce the toxicity of acrylamide in experimental studies, but are unproven.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Combustion generates toxic fumes. Use water spray to keep fire-exposed containers cool. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam.

Flash Point: Not applicable.

Autoignition Temperature: Not applicable.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 2; Flammability: 1; Instability: 1

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Avoid breathing dust.

Storage: Store in a tightly closed container. Keep refrigerated. (Store below 4°C/39°F.) Keep away from polymerization catalysts. Store away from heat, oxidizing agents, acids, alkalis,

and sunlight.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
N,N'-Methylenebis(acrylamide)	none listed	none listed	none listed

OSHA Vacated PELs: N,N'-Methylenebis(acrylamide): No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: 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: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Solid

Appearance: white

Odor: none reported

pH: >5 (2.5% soln)

Vapor Pressure: Negligible.

Vapor Density: 5.31 (air=1)

Evaporation Rate: Negligible.

Viscosity: Not available.

Boiling Point: Not available.

Freezing/Melting Point: > 300 deg C

Decomposition Temperature: Not available.

Solubility: Slightly soluble.

Specific Gravity/Density: 1.2 (water=1)

Molecular Formula: C7H10N2O2

Molecular Weight: 154.17

Section 10 - Stability and Reactivity

Chemical Stability: Stable. However, may decompose if heated. May polymerize on exposure to light.

Conditions to Avoid: Light, heat.

Incompatibilities with Other Materials: Strong oxidizing agents, strong reducing agents,

strong acids, strong bases.

Hazardous Decomposition Products: Carbon monoxide, oxides of nitrogen, carbon dioxide, ammonia and/or derivatives.

Hazardous Polymerization: May occur.

Section 11 - Toxicological Information

RTECS#:

CAS# 110-26-9: AS3678000

LD50/LC50:

CAS# 110-26-9:

Oral, mouse: LD50 = 380 mg/kg;

Oral, rat: LD50 = 390 mg/kg;

Carcinogenicity:

CAS# 110-26-9: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information available.

Teratogenicity: Administration of BAC by gavage to pregnant mice produced an increase in skeletal variations among fetuses at maternal doses of 10 mg/kg/d. Maternal toxicity was not encountered below 30 mg/kg/d.

Reproductive Effects: Methylenebisacrylamide (MBA) was found to have greater testicular effects than detectable neurotoxic effects in mice. MBA showed dominant lethal reproductive toxicity in F0 males (fewer live pups/litter, more resorptions) and females (lowered F1 pupweight) at exposure levels that did not affect body weight and had no effect on grip strength or histopathologic measures of neurotoxicity.

Mutagenicity: See actual entry in RTECS for complete information.

Neurotoxicity: Neurotoxic effects have occurred in experimental animals.

Other Studies:

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

Section 14 - Transport Information

US DOT

Canada TDG

Shipping Name:	Not Regulated	Not Regulated
Hazard Class:		
UN Number:		
Packing Group:		

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 110-26-9 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 110-26-9: immediate, delayed, reactive.

Section 313

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants.

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 110-26-9 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

XN

Risk Phrases:

R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

R 36/37/38 Irritating to eyes, respiratory system and skin.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 36/37 Wear suitable protective clothing and gloves.

WGK (Water Danger/Protection)

CAS# 110-26-9: 2

Canada - DSL/NDSL

CAS# 110-26-9 is listed on Canada's DSL List.

Canada - WHMIS

not available.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

Section 16 - Additional Information

MSDS Creation Date: 12/12/1997

Revision #11 Date: 11/08/2007

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.