

4-6-06

Material Safety Data Sheet
 Acrylamide/Bis-Acrylamide Mixture
 91622

Section 1 - Chemical Product and Company Identification

MSDS Name: Acrylamide/Bis-Acrylamide Mixture
 Catalog Numbers: BP1364-100, BP1366-100, BP1368-100
 Synonyms:
 Company Identification: Fisher Scientific
 One Reagent Lane
 Fair Lawn, NJ 07410

For information in the US, call:
 201-796-7100
 Emergency Number US: 201-796-7100
 CHEMTREC Phone Number, US:
 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#: 79-06-1
 Chemical Name: Acrylamide
 %: 90-99
 EINECS#: 201-173-7
 Hazard Symbols:
 Risk Phrases:

CAS#: 110-26-9
 Chemical Name: Methylene diacrylamide
 %: 1-10
 EINECS#: 203-750-9
 Hazard Symbols:
 Risk Phrases:

Text for R-phrases: see Section 16
 Hazard Symbols:
 Risk Phrases:
 45 46 20/21 25 36/38 43 48/23/24/25 62

Section 3 - Hazards Identification
 EMERGENCY OVERVIEW

Warning! Causes eye irritation. May cause allergic skin reaction. Light sensitive. Air sensitive. Cancer suspect agent. Harmful if swallowed, inhaled, or absorbed through the skin. Acrylamide may cause nervous system damage. Acrylamide caused cancer and male reproductive disorders in laboratory animal tests. Acrylamide may polymerize explosively if heated to 183°F (84°C). Acrylamide may form explosive dust-air mixtures. Target Organs: Eyes, nervous system, reproductive system, skin. Potential Health Effects

Eye: Causes eye irritation. Acrylamide can be absorbed through the eyes and overexposure will produce the signs and symptoms of neurotoxicity described below.

Skin: May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. Acrylamide is readily absorbed through unbroken skin and can cause nervous system effects (neurotoxicity). These effects can result from a single overexposure but are more likely after repeated exposures to small amounts over a period of days or weeks. Signs and symptoms of overexposure include increased sweating of the hands and feet, numbness, tingling and weakness in the extremities, unsteady gait and decreased reflexes. If the exposure route is dermal, the symptoms may be preceded by peeling and redness of the skin at the areas of exposure, normally the hands and feet.

Ingestion: Harmful if swallowed.

Inhalation: Acrylamide tends to sublime (go directly from solid to vapor form) which may lead to inhalation exposure. Acrylamide can be absorbed through the lungs and overexposure will produce the signs and symptoms of neurotoxicity described above.

Chronic: Prolonged or repeated skin contact may cause dermatitis. May cause cancer according to animal studies. 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, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. 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: Either acute or chronic exposure may lead to weak or absent reflexes, positive Romberg's sign, loss of vibration and position senses and numbness and tingling of the limbs. An early sign of toxic effects is peeling of the skin of the fingertips.

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: Containers can build up pressure if exposed to heat and/or fire. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Use water spray to keep fire-exposed containers cool. Dust can be an explosion hazard when exposed to heat or flame. Combustible solid. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or chemical foam. Autoignition Temperature: Not applicable. Flash Point: Not applicable.

Explosion Limits: Lower: Not available
 Explosion Limits: Upper: Not available
 NFPA Rating:
 health: 2; flammability: 2; instability: 2;
 Section 6 - Accidental Release Measures

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

Spills/Leaks: Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Avoid generating dusty conditions. Remove all sources of ignition. Isolate area and deny entry. Provide ventilation.

Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Keep away from heat, sparks and flame. Do not ingest or inhale. Use only in a chemical fume hood.

Storage: Keep away from heat, sparks, and flame. Do not store in direct sunlight. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from acids. Do not store near alkaline substances. Keep away from polymerization catalysts. Should not be exposed to temperatures above 122°F (50°C).

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Utilize a closed system process where feasible.

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Acrylamide	0.03 mg/m3 (inhalable fraction and vapor); Skin - potential significant contribution to overall exposure by the cutaneous route	0.03 mg/m3 TWA 60 mg/m3 IDLH	0.3 mg/m3 TWA
Methylenediacylamide	none listed	none listed	none listed

OSHA Vacated PELs:
 Acrylamide:
 0.03 mg/m3 TWA
 Methylenediacylamide:
 None listed

Personal Protective Equipment
 Eyes: Wear chemical splash goggles.

Skin: Wear appropriate protective gloves to prevent skin

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exposure.

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
Color: white
Odor: none reported
PH: Not available
Vapor Pressure: Not available
Vapor Density: Not available
Evaporation Rate: Not available
Viscosity: Not available
Boiling Point: Not available
Freezing/Melting Point: Not available
Decomposition Temperature: Not available
Solubility in water: Soluble
Specific Gravity/Density: Not available.
Molecular Formula: Mixture
Molecular Weight: Not available

Section 10 - Stability and Reactivity

Chemical Stability:

Stable. However may polymerize explosively if heated to the melting point. May polymerize on exposure to light.

Conditions to Avoid:

Light, ignition sources, moisture, exposure to air, heat.

Incompatibilities with Other Materials

Metals, oxidizing agents, reducing agents, acids, bases, peroxides.

Hazardous Decomposition Products

Carbon monoxide, oxides of nitrogen, carbon dioxide, ammonia and/or derivatives, hydrogen gas.

Hazardous Polymerization

Has not been reported.

Section 11 - Toxicological Information

RTECS#:

CAS# 79-06-1: AS3325000

CAS# 110-26-9: AS3678000

LD50/LC50:

RTECS: CAS# 79-06-1: Draize test, rabbit, eye: 100 mg/24H
Moderate; Draize test, rabbit, skin: 50 mg/3D Mild; Draize test, rabbit, skin: 500 mg/24H Mild; Oral, mouse: LD50 = 107 mg/kg; Oral, rabbit: LD50 = 150 mg/kg; Oral, rat: LD50 = 124 mg/kg; Skin, rabbit: LD50 = 1680 uL/kg; Skin, rat: LD50 = 400 mg/kg.

RTECS: CAS# 110-26-9: Oral, mouse: LD50 = 380 mg/kg;

Oral, rat: LD50 = 390 mg/kg.

Carcinogenicity:

Acrylamide -

ACGIH: A3 - Confirmed animal carcinogen with unknown relevance to humans

California: carcinogen, initial date 1/1/90

NTP: Suspect carcinogen

IARC: Group 2A carcinogen

Methylenediacrylamide -

Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology:

ACGIH calls acrylamide a confirmed animal carcinogen with unknown relevance to humans. An epidemiological study involving 8854 workers, 2293 exposed to acrylamide, did not show any significant increase in cancer mortality related to acrylamide exposure.

Teratogenicity:

See actual entry in RTECS for complete information.

Reproductive:

Adverse reproductive effects have occurred in experimental animals. Hazard Category 3: CHIP: Chemicals Hazard Information and Packaging for Supply Regulations. (London, England)

Neurotoxicity:

Neurotoxic effects have occurred in humans.

Mutagenicity:

See actual entry in RTECS for complete information. Hazard Category 2: CHIP: Chemicals Hazard Information and Packaging for Supply Regulations. (London, England)

Other:

See actual entry in RTECS for complete information. Carcinogenic Hazard Category 2: CHIP: Chemicals Hazard Information and Packaging for Supply Regulations. (London, England)

Section 12 - Ecological Information

Other:

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

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classification.

RCRA P-Series: None listed.

RCRA U-Series: CAS# 79-06-1; waste number U007.

Section 14 - Transport Information

US DOT

Shipping Name: ACRYLAMIDE, SOLID, MIXTURE
Hazard Class: 6.1
UN Number: UN2074
Packing Group: III

Canada TDG

Shipping Name: ACRYLAMIDE, SOLID
Hazard Class: 6.1
UN Number: UN2074
Packing Group: III

USA RQ: CAS# 79-06-1: 5000 lb final RQ; 2270 kg final RQ
Section 15 - Regulatory Information

US Federal

TSCA

CAS# 79-06-1 is listed on the TSCA Inventory.

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

Health & Safety Reporting List

CAS# 79-06-1: Effective 10/4/82, Sunset 10/4/92

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

CAS# 79-06-1: 5000 lb final RQ; 2270 kg final RQ

SARA Section 302 Extremely Hazardous Substances

CAS# 79-06-1: 1000 lb TPQ (lower threshold); 10000 lb TPQ (upper threshold)

SARA Codes

CAS # 79-06-1: acute, chronic, sudden release of pressure, reactive.

CAS # 110-26-9: acute, chronic, reactive.

Section 313

This material contains Acrylamide (CAS# 79-06-1, 90 99%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 372.

Clean Air Act:

CAS# 79-06-1 is listed as a hazardous air pollutant (HAP).

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:

STATE

Acrylamide can be found on the following state right to know lists:

California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

Methylenediacrylamide is not present on state lists from CA, PA, MN,

MA, FL, or NJ.

California Prop 65

The following statement(s) is(are) made in order to comply with

The California Safe Drinking Water Act:

WARNING: This product contains Acrylamide, a chemical known to the

state of California to cause cancer.

California No Significant Risk Level:

CAS# 79-06-1: 0.2 5g/day NSRL

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: T

Risk Phrases:

R 45 May cause cancer.
R 46 May cause heritable genetic damage.
R 20/21 Harmful by inhalation and in contact with skin.
R 25 Toxic if swallowed.
R 36/38 Irritating to eyes and skin.
R 43 May cause sensitization by skin contact.
R 48/23/24/25 Toxic : danger of serious damage to health by prolonged exposure through inhalation, contact with skin and if swallowed.
R 62 Possible risk of impaired fertility.

Safety Phrases:

S 53 Avoid exposure - obtain special instructions before use.
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

WGK (Water Danger/Protection)

CAS# 79-06-1: 3

CAS# 110-26-9: 2

Canada

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CAS# 79-06-1 is listed on Canada's DSL List
CAS# 110-26-9 is listed on Canada's DSL List
Canadian WHMIS Classifications: D1B, D2A, D2B
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.
CAS# 79-06-1 is listed on Canada's Ingredient Disclosure List
CAS# 110-26-9 is not listed on Canada's Ingredient Disclosure
List.

MSDS Creation Date: Section 16 - Other Information

8/03/2000

Revision #3 Date

7/12/2005

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 the company 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 the company has been advised of the
possibility of such damages.
