



Material Safety Data Sheet

NFPA	HMIS	Personal Protective Equipment						
	<table><tr><td>Health Hazard</td><td>2</td></tr><tr><td>Fire Hazard</td><td>1</td></tr><tr><td>Reactivity</td><td>0</td></tr></table>	Health Hazard	2	Fire Hazard	1	Reactivity	0	
Health Hazard	2							
Fire Hazard	1							
Reactivity	0							
		See Section 15.						

Section 1. Chemical Product and Company Identification			Page Number: 1
Common Name/ Trade Name	Acrylamide - BIS 19:1	Catalog Number(s).	A1654, A1031
		CAS#	Mixture.
Manufacturer	SPECTRUM QUALITY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	RTECS	Not applicable.
		TSCA	T S C A 8(b) inventory: Acrylamide; N,N'-methylenebisacrylamide
Commercial Name(s)	Not available.	CI#	Not applicable.
Synonym	Acrylamide-Bisacrylamide, 19:1	<u>IN CASE OF EMERGENCY</u> <u>CHEMTREC (24hr) 800-424-9300</u> CALL (310) 516-8000	
Chemical Name	Not applicable.		
Chemical Family	Aliphatic amide (Aliphatic.)		
Chemical Formula	Not applicable.		
Supplier	SPECTRUM QUALITY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248		

Section 2. Composition and Information on Ingredients					
		Exposure Limits			
Name	CAS #	TWA (mg/m ³)	STEL (mg/m ³)	CEIL (mg/m ³)	% by Weight
1) Acrylamide	79-06-1	0.03			95
2) {N,N'}-methylenebisacrylamide	110-26-9				5
Toxicological Data on Ingredients Acrylamide: ORAL (LD50): Acute: 124 mg/kg [Rat]. 107 mg/kg [Mouse]. DERMAL (LD50): Acute: 1680 mg/kg [Rat]. N,N'-methylenebisacrylamide: ORAL (LD50): Acute: 390 mg/kg [Rat].					

Section 3. Hazards Identification	
Potential Acute Health Effects	Hazardous in case of skin contact (sensitizer, permeator), of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant). Severe over-exposure can result in death.

Continued on Next Page

Potential Chronic Health Effects

CARCINOGENIC EFFECTS: Classified + (Proven.) by NIOSH [Acrylamide]. Classified A3 (Proven for animal.) by ACGIH [Acrylamide]. Classified 2A (Probable for human.) by IARC, 2 (Some evidence.) by NTP [Acrylamide].

MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. [Acrylamide]. Mutagenic for bacteria and/or yeast. [Acrylamide]. Mutagenic for bacteria and/or yeast. [N,N'-methylenebisacrylamide].

TERATOGENIC EFFECTS: Not available.

DEVELOPMENTAL TOXICITY: Not available.

The substance may be toxic to kidneys, the nervous system, peripheral nervous system, central nervous system (CNS).

Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4. First Aid Measures**Eye Contact**

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention.

Skin Contact

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Serious Skin Contact

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation

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

Serious Inhalation

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. **WARNING:** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek medical attention.

Ingestion

If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Serious Ingestion

Not available.

Section 5. Fire and Explosion Data**Flammability of the Product**

May be combustible at high temperature.

Auto-Ignition Temperature

The lowest known value is 424°C (795.2°F) (Acrylamide).

Flash Points

The lowest known value is CLOSED CUP: 138°C (280.4°F). (Acrylamide)

Flammable Limits

Not available.

Products of Combustion

These products are carbon oxides (CO, CO₂), nitrogen oxides (NO, NO₂...).

Fire Hazards in Presence of Various Substances

Slightly flammable to flammable in presence of heat.
Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances

Risks of explosion of the product in presence of mechanical impact: Not available.
Risks of explosion of the product in presence of static discharge: Not available.

Fire Fighting Media and Instructions

SMALL FIRE: Use DRY chemical powder.
LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards

When heated to decomposition it emits acrid smoke and fumes. (Acrylamide)

Special Remarks on Explosion Hazards

Material in powder form, capable of creating a dust explosion. (Acrylamide)

Section 6. Accidental Release Measures

Small Spill	Use appropriate tools to put the spilled solid in a convenient waste disposal container.
Large Spill	Poisonous solid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

Section 7. Handling and Storage

Precautions	Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, acids, alkalis, moisture.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area.

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
Personal Protection	Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
Exposure Limits	Acrylamide TWA: 0.03 (mg/m ³) [Australia] Inhalation TWA: 0.3 (mg/m ³) from OSHA (PEL) [United States] Inhalation TWA: 0.03 (mg/m ³) from NIOSH Inhalation TWA: 0.03 (mg/m ³) from NIOSH SKIN TWA: 0.3 (mg/m ³) [United Kingdom (UK)] Inhalation TWA: 0.03 (mg/m ³) from ACGIH (TLV) [United States] [1999] Inhalation Consult local authorities for acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical state and appearance	Solid.	Odor	Not available.
Molecular Weight	Not applicable.	Taste	Not available.
pH (1% soln/water)	Not available.	Color	Not available.
Boiling Point	Not available.		
Melting Point	300°C (572°F) based on data for: N,N'-methylenebisacrylamide. Weighted average: 95.28°C (203.5°F)		
Critical Temperature	Not available.		
Specific Gravity	Weighted average: 1.13 (Water = 1)		
Vapor Pressure	Not applicable.		
Vapor Density	The highest known value is 5.31 (Air = 1) (N,N'-methylenebisacrylamide). Weighted average: 2.59 (Air = 1)		
Volatility	Not available.		
Odor Threshold	Not available.		
Water/Oil Dist. Coeff.	Not available.		
Ionicity (in Water)	Not available.		

Continued on Next Page

Dispersion Properties See solubility in water, methanol, acetone.

Solubility Soluble in cold water, hot water, methanol.
Partially soluble in acetone.

Section 10. Stability and Reactivity Data

Stability The product is stable.

Instability Temperature Not available.

Conditions of Instability Excess heat, dust generation, ultraviolet light, incompatible materials. (Acrylamide)

Incompatibility with various substances Reactive with oxidizing agents, acids, alkalis, moisture.

Corrosivity Non-corrosive in presence of glass.

Special Remarks on Reactivity Light Sensitive. May polymerize on exposure to ultraviolet light. The solid is stable at room temperature but may polymerize violently on melting or when heated above 50 C.
Reacts spontaneously with hydroxyl-, amino-, and sulfhydryl- containing compounds.
Reacts vigorously with acids, bases producing ammonia salts and acrylic acid.
Spontaneous polymerization does not readily occur, but requires the presence of dimethylaminopropionitrile (DMAPN) catalyst and ammonium persulfate. Also, Acrylamide may polymerize upon contact with oxidizing materials e.g. peroxides.. (Acrylamide)

Special Remarks on Corrosivity Not available.

Polymerization Yes. Upon exposure to ultraviolet light. The solid is stable at room temperature but may polymerize violently on melting or when heated above 50 C.

Section 11. Toxicological Information

Routes of Entry Dermal contact. Eye contact. Inhalation. Ingestion.

Toxicity to Animals Acute oral toxicity (LD50): 111 mg/kg (Mouse) (Calculated value for the mixture).
Acute dermal toxicity (LD50): 400 mg/kg [Rat]. (Acrylamide).

Chronic Effects on Humans **CARCINOGENIC EFFECTS:** Classified + (Proven.) by NIOSH [Acrylamide]. Classified A3 (Proven for animal.) by ACGIH [Acrylamide]. Classified 2A (Probable for human.) by IARC, 2 (Some evidence.) by NTP [Acrylamide].
MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. [Acrylamide]. Mutagenic for bacteria and/or yeast. [Acrylamide]. Mutagenic for bacteria and/or yeast. [N,N'-methylenebisacrylamide].
Contains material which may cause damage to the following organs: kidneys, the nervous system, peripheral nervous system, central nervous system (CNS).

Other Toxic Effects on Humans Hazardous in case of skin contact (sensitizer, permeator), of ingestion, of inhalation.
Slightly hazardous in case of skin contact (irritant).

Special Remarks on Toxicity to Animals Not available.

Special Remarks on Chronic Effects on Humans Crosses placental barrier, occurs in breast milk. Accumulates temporarily, but most is broken down within a day.
May affect genetic material.
May also have tumorigenic effects based on animal studies.
May cause adverse reproductive effects (fetotoxicity and male fertility) and birth defects (teratogenic). (Acrylamide)

Special Remarks on other Toxic Effects on Humans Acute Potential Health Effects:
Skin: Causes skin irritation and dermatitis. May be harmful if absorbed through the skin. May be absorbed through unbroken skin and affect blood, behavior/central nervous system, and peripheral nervous system (variable polyneuropathy with motor and sensory impairment). Symptoms may include numbness, paresthesias, ataxia, tremor, dysarthria and other symptoms similar to ingestion. Absorption of acrylamide through skin may also affect the gastrointestinal tract and cause nausea and vomiting.
Eyes: Causes eye irritation.
Inhalation: May cause irritation of the respiratory tract and mucous membranes.
Ingestion: Harmful if swallowed. May cause irritation of the digestive (gastrointestinal) tract including nausea and vomiting. May affect the spinal cord, behavior/Central and Peripheral nervous systems. Symptoms may include change in motor activity, weakness, flaccid paralysis, ataxia, irritability, drowsiness, somnolence, disturbances of balance, tremors, convulsions, spasticity, disorientation, confusion, memory loss, and hallucinations. May also

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affect metabolism (anorexia), blood (thrombocytopenia), liver (mild hepatotoxicity), kidneys (urinary retention, renal toxicity), and cardiovascular system.

Chronic Potential Health Effects:

Prolonged or repeated exposure through skin absorption and ingestion may produce symptoms similar to acute exposure as well as affecting the brain (degenerative changes in nerve fibers) and spinal cord (degenerative changes in nerve fibers and demyelination).

(Acrylamide)


Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	The products of degradation are less toxic than the product itself.
Special Remarks on the Products of Biodegradation	Not available.

Section 13. Disposal Considerations

Waste Disposal	Waste must be disposed of in accordance with federal, state and local environmental control regulations.
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Section 14. Transport Information

DOT Classification	CLASS 6.1: Poisonous material.
Identification	: Acrylamide, solid, mixture (Acrylamide) UNNA: 2074 PG: III
Special Provisions for Transport	Not available.
DOT (Pictograms)	

Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations	<p>California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer, birth defects or other reproductive harm, which would require a warning under the statute: Acrylamide</p> <p>California prop. 65 (no significant risk level): Acrylamide: 0.0002 mg/day (value)</p> <p>California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Acrylamide</p> <p>Connecticut hazardous material survey.: Acrylamide</p> <p>Illinois toxic substances disclosure to employee act: Acrylamide</p> <p>Illinois chemical safety act: Acrylamide</p> <p>New York release reporting list: Acrylamide</p> <p>Rhode Island RTK hazardous substances: Acrylamide</p> <p>Pennsylvania RTK: Acrylamide</p> <p>Florida: Acrylamide</p> <p>Minnesota: Acrylamide</p> <p>Massachusetts RTK: Acrylamide</p> <p>Massachusetts spill list: Acrylamide</p> <p>New Jersey: Acrylamide</p> <p>New Jersey spill list: Acrylamide</p> <p>Louisiana RTK reporting list: Acrylamide</p> <p>Louisiana spill reporting: Acrylamide</p>
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California Director's List of Hazardous Substances: Acrylamide
 TSCA 8(b) inventory: Acrylamide; N,N'-methylenebisacrylamide
 TSCA 8(d) H and S data reporting: Acrylamide: 10/4/82; Sunset Date: 10/4/92
 TSCA 12(b) annual export notification: Acrylamide
 SARA 302/304/311/312 extremely hazardous substances: Acrylamide
 SARA 313 toxic chemical notification and release reporting: Acrylamide 95%
 CERCLA: Hazardous substances.: Acrylamide: 5000 lbs. (2268 kg);

California Proposition 65 Warnings

California prop. 65: This product contains the following ingredients for which the State of California has found to cause cancer which would require a warning under the statute: Acrylamide
 California prop. 65: This product contains the following ingredients for which the State of California has found to cause birth defects which would require a warning under the statute: No products were found.

Other Regulations

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications

WHMIS (Canada)

CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC).
 CLASS D-2A: Material causing other toxic effects (VERY TOXIC).
 Class D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC)

R20/21- Harmful by inhalation and in contact with skin.
 R25- Toxic if swallowed.
 R36/38- Irritating to eyes and skin.
 R43- May cause sensitization by skin contact.
 R45- May cause cancer.
 R46- May cause heritable genetic damage.
 R62- Possible risk of impaired fertility.
 R48/23/24/25- Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.

S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
 S53- Avoid exposure - obtain special instructions before use.

HMIS (U.S.A.)

Health Hazard	2
Fire Hazard	1
Reactivity	0
Personal Protection	E

National Fire Protection Association (U.S.A.)

Health



Flammability

Reactivity

Specific hazard

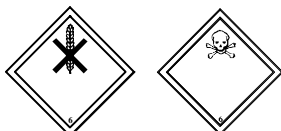
WHMIS (Canada) (Pictograms)



DSCL (Europe) (Pictograms)



TDG (Canada) (Pictograms)



ADR (Europe) (Pictograms)



Protective Equipment



Gloves.



Lab coat.



Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.



Splash goggles.

Section 16. Other Information**MSDS Code** A3232**References** Not available.**Other Special Considerations** Not available.

Validated by Sonia Owen on 5/29/2007.

Verified by Sonia Owen.

Printed 6/15/2007.

CALL (310) 516-8000

Notice to Reader

All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, Spectrum Quality Products, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.