GARDENA, CA
NEW BRUNSWICK, NJ

Material Safety Data Sheet

NFPA	HMIS	Personal Protective Equipment
0 / 2 / 1	Health Hazard 1 Fire Hazard 0 Reactivity 0	See Section 15.

Section 1. Chemical Product and Company Identification

Common Name/ Trade Name	**Page, 8% Solution**	**Catalog Number(s).**	P1039
		CAS#	Mixture.
Manufacturer	SPECTRUM LABORATORY PRODUCTS INC. 14422 S. SAN PEDRO STREET GARDENA, CA 90248	**RTECS**	Not applicable.
		TSCA	TSCA 8(b) inventory: Acrylamide; Urea; Boric acid; Tromethamine; N,N'-methylenebisacrylamide; Water
Commercial Name(s)	Not available.	**CI#**	Not applicable.
Synonym	Polyacrylamide Gell Electrophoresis	**IN CASE OF EMERGENCY CHEMTREC (24hr) 800-424-9300**	
Chemical Name	Not applicable.		
Chemical Family	Aliphatic amide (Aliphatic.)	CALL (310) 516-8000	
Chemical Formula	Not applicable.		
Supplier	SPECTRUM LABORATORY 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			3.8-7.8
2) Urea	57-13-6				<1
3) Boric acid	10043-35-3				<1
4) Tromethamine	77-86-1				<1
5) {N,N'-}methylenebisacrylamide	110-26-9				0.2-0.4
6) Water	7732-18-5				<97

Toxicological Data on Ingredients

Acrylamide:
ORAL (LD50): Acute: 124 mg/kg [Rat.]. 107 mg/kg [Mouse]. 150 mg/kg [Rabbit].
DERMAL (LD50): Acute: 400 mg/kg [Rat]. 1680 mg/kg [Rabbit].

Urea:
ORAL (LD50): Acute: 8471 mg/kg [Rat]. 11000 mg/kg [Mouse].

Boric acid:
ORAL (LD50): Acute: 2660 mg/kg [Rat]. 3450 mg/kg [Mouse].

Tromethamine:
ORAL (LD50): Acute: 5900 mg/kg [Rat].

N,N'-methylenebisacrylamide:
ORAL (LD50): Acute: 390 mg/kg [Rat]. 380 mg/kg [Mouse].

Continued on Next Page

Section 3. Hazards Identification

Potential Acute Health Effects	Slightly hazardous in case of skin contact (irritant, permeator), of eye contact (irritant), of ingestion. Severe over-exposure can result in death.
Potential Chronic Health Effects	**CARCINOGENIC EFFECTS**: Classified + (Proven.) by OSHA+ (Proven.) by NIOSH [Acrylamide]. Classified A3 (Proven for animal.) by ACGIH [Acrylamide]. Classified 2A (Probable for human.) by IARC, 2 (Some evidence.) by NTP, 2 (Suspected for human.) by European Union [Acrylamide]. **MUTAGENIC EFFECTS**: Mutagenic for mammalian somatic cells. [Acrylamide]. Mutagenic for bacteria and/or yeast. [Acrylamide]. Mutagenic for mammalian somatic cells. [Urea]. Mutagenic for bacteria and/or yeast. [Boric acid]. Mutagenic for bacteria and/or yeast. [N,N'-methylenebisacrylamide]. **TERATOGENIC EFFECTS**: Not available. **DEVELOPMENTAL TOXICITY**: Classified Reproductive system/toxin/male [POSSIBLE] [Acrylamide]. Classified Reproductive system/toxin/female, Reproductive system/toxin/male [POSSIBLE] [Boric acid]. The substance may be toxic to blood, kidneys, the nervous system, liver, peripheral nervous system, cardiovascular system, skin, 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 if irritation occurs.
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	Not available.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Serious Inhalation	Not available.
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	Non-flammable.
Auto-Ignition Temperature	Not applicable.
Flash Points	Not applicable.
Flammable Limits	Not applicable.
Products of Combustion	Not available.
Fire Hazards in Presence of Various Substances	Not applicable.
Explosion Hazards in Presence of Various Substances	Risks of explosion of the product in presence of static discharge: Not available. Non-explosive in presence of shocks.
Fire Fighting Media and Instructions	Not applicable.
Special Remarks on Fire Hazards	Not available.

Continued on Next Page

Special Remarks on Explosion Hazards	Not Available

Section 6. Accidental Release Measures

Small Spill	Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
Large Spill	Poisonous liquid. 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. Call for assistance on disposal. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. 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	Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label.
Storage	Keep container tightly closed. Keep container in a cool, well-ventilated area. Refrigerate

Section 8. Exposure Controls/Personal Protection

Engineering Controls	Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.
Personal Protection	Safety glasses. Lab coat. Gloves.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Boots. Gloves. 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	Liquid.	**Odor**	Characteristic. (Slight.)
Molecular Weight	Not applicable.	**Taste**	Not available.
pH (1% soln/water)	Not available	**Color**	Clear Colorless.

Boiling Point	The lowest known value is 100°C (212°F) (Water).
Melting Point	Not available.
Critical Temperature	Not available.
Specific Gravity	Weighted average: 1.01 (Water = 1)
Vapor Pressure	The highest known value is 2.3 kPa (@ 20°C) (Water).
Vapor Density	The highest known value is 0.62 (Air = 1) (Water).
Volatility	Not available.
Odor Threshold	Not available.
Water/Oil Dist. Coeff.	Not available.

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Ionicity (in Water)	Not available.
Dispersion Properties	See solubility in water, methanol, acetone.
Solubility	Easily soluble in cold water, hot water. Soluble in methanol. Partially soluble in acetone.

Section 10. Stability and Reactivity Data

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Incompatible materials
Incompatibility with various substances	Slightly reactive to reactive with oxidizing agents, acids, alkalis.
Corrosivity	Non-corrosive in presence of glass.
Special Remarks on Reactivity	Light Sensitive. May polymerize on exposure to 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	Will not occur.

Section 11. Toxicological Information

Routes of Entry	Absorbed through skin. Eye contact.
Toxicity to Animals	Acute oral toxicity (LD50): 107 mg/kg [Mouse]. (Acrylamide). Acute dermal toxicity (LD50): 400 mg/kg [Rat]. (Acrylamide).
Chronic Effects on Humans	**CARCINOGENIC EFFECTS**: Classified + (Proven.) by OSHA+ (Proven.) by NIOSH [Acrylamide]. Classified A3 (Proven for animal.) by ACGIH [Acrylamide]. Classified 2A (Probable for human.) by IARC, 2 (Some evidence.) by NTP, 2 (Suspected for human.) by European Union [Acrylamide]. **MUTAGENIC EFFECTS**: Mutagenic for mammalian somatic cells. [Acrylamide]. Mutagenic for bacteria and/or yeast. [Acrylamide]. Mutagenic for mammalian somatic cells. [Urea]. Mutagenic for bacteria and/or yeast. [Boric acid]. Mutagenic for bacteria and/or yeast. [N,N'-methylenebisacrylamide]. **DEVELOPMENTAL TOXICITY**: Classified Reproductive system/toxin/male [POSSIBLE] [Acrylamide]. Classified Reproductive system/toxin/female, Reproductive system/toxin/male [POSSIBLE] [Boric acid]. Contains material which may cause damage to the following organs: blood, kidneys, the nervous system, liver, peripheral nervous system, cardiovascular system, skin, central nervous system (CNS).
Other Toxic Effects on Humans	Slightly hazardous in case of skin contact (irritant, permeator), of ingestion, of inhalation.
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	Crosses placental barrier, occurs in breast milk. Accumlates 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	

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Acute Potential Health Effects:
Skin: Causes skin irritation and dermatitis. 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. Apsorption 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: 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 affect metabolism (anorexia), blood (thrombocytopenia), liver (mild hepatotoxicity), kidneys (urinary rentenion, 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.

Section 14. Transport Information

DOT Classification	Not a DOT controlled material (United States).
Identification	Not applicable.
Special Provisions for Transport	Not applicable.
DOT (Pictograms)	

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Section 15. Other Regulatory Information and Pictograms

Federal and State Regulations

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
California prop. 65 (no significant risk level): Acrylamide
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
New York release reporting list: Acrylamide
Rhode Island RTK hazardous substances: Acrylamide
Pennsylvania RTK: Acrylamide
Florida: Acrylamide
Minnesota: Urea
Massachusetts RTK: Acrylamide
New Jersey: Acrylamide
TSCA 8(b) inventory: Acrylamide; Urea; Boric acid; Tromethamine; N,N'-methylenebisacrylamide; Water
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 5.8%
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

Other Regulations

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

Other Classifications

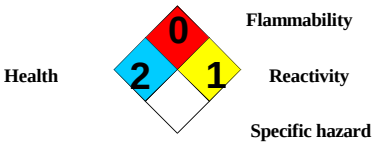
WHMIS (Canada) Not controlled under WHMIS (Canada).

DSCL (EEC) Nort available S24/25- Avoid contact with skin and eyes.

HMIS (U.S.A.)

Health Hazard	1
Fire Hazard	0
Reactivity	0
Personal Protection	b

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



WHMIS (Canada) (Pictograms)

DSCL (Europe) (Pictograms)

TDG (Canada) (Pictograms)

ADR (Europe) (Pictograms)

Protective Equipment

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Gloves.

Lab coat.

Wear appropriate respirator when ventilation is inadequate.

Safety glasses.

Section 16. Other Information

MSDS Code	**P3027**
References	Not available.
Other Special Considerations	Not available.

Validated by Sonia Owen on 8/11/2006.	**Verified by Sonia Owen.** **Printed 9/13/2006.**

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.