

SECTION 1: Identification

1.1. Identification

Product form	: Substance
Trade name	: Acrylamide, Chemzymes Ultra Pure®
CAS-No.	: 79-06-1
Product code	: 00019
Formula	: C3H5NO
Synonyms	: Acrylic amide / 2-Propenamamide / Acrylamide monomer / Acrylamide, solid / Prop-2-enamide
Other means of identification	: 00019

1.2. Recommended use and restrictions on use

Recommended use	: Manufacture of substances, Use as laboratory reagent, Scientific research and development
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1.3. Supplier

Supplier

Polysciences Inc
400 Valley Road
Warrington, PA 18976 - United States
T (215)-343-6484 - F (215)-343-0214
info@polysciences.com - www.polysciences.com

1.4. Emergency telephone number

Emergency number	: (215)-378-4526
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SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Acute toxicity (oral), Category 3	H301	Toxic if swallowed
Acute toxicity (dermal), Category 3	H311	Toxic in contact with skin
Acute toxicity (inhalation:dust,mist) Category 4	H332	Harmful if inhaled
Skin corrosion/irritation, Category 2	H315	Causes skin irritation
Serious eye damage/eye irritation, Category 2	H319	Causes serious eye irritation
Skin sensitisation, Category 1	H317	May cause an allergic skin reaction
Germ cell mutagenicity, Category 1B	H340	May cause genetic defects
Carcinogenicity, Category 1B	H350	May cause cancer
Specific target organ toxicity — Repeated exposure, Category 1	H372	Causes damage to organs through prolonged or repeated exposure

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS-US labelling

Hazard pictograms (GHS-US)



Signal word (GHS-US)

: Danger

Hazard statements (GHS-US)

: H301+H311 - Toxic if swallowed or in contact with skin

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	H315 - Causes skin irritation H317 - May cause an allergic skin reaction H319 - Causes serious eye irritation H332 - Harmful if inhaled H340 - May cause genetic defects H350 - May cause cancer H372 - Causes damage to organs through prolonged or repeated exposure
Precautionary statements (GHS-US)	: P201 - Obtain special instructions before use P202 - Do not handle until all safety precautions have been read and understood P260 - Do not breathe dust/fume/gas/mist/vapours/spray P261 - Avoid breathing dust/fume/gas/mist/vapours/spray P264 - Wash hands, forearms and face thoroughly after handling P270 - Do not eat, drink or smoke when using this product P271 - Use only outdoors or in a well-ventilated area P272 - Contaminated work clothing must not be allowed out of the workplace P280 - Wear protective gloves/protective clothing/eye protection/face protection P301+P310 - If swallowed: Immediately call a poison center/doctor/... P302+P352 - If on skin: Wash with plenty of water/... P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P308+P313 - If exposed or concerned: Get medical advice/attention P312 - Call a poison center/doctor/... if you feel unwell P314 - Get medical advice/attention if you feel unwell P321 - Specific treatment (see supplemental first aid instruction on this label) P322 - Specific treatment (see ... on this label) P330 - Rinse mouth P332+P313 - If skin irritation occurs: Get medical advice/attention P333+P313 - If skin irritation or rash occurs: Get medical advice/attention P337+P313 - If eye irritation persists: Get medical advice/attention P361+P364 - Take off immediately all contaminated clothing and wash it before reuse P362+P364 - Take off contaminated clothing and wash it before reuse P363 - Wash contaminated clothing before reuse P405 - Store locked up P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Substance

Name	Product identifier	%	GHS-US classification
Acrylamide (Main constituent)	(CAS-No.) 79-06-1	<= 100	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Muta. 1B, H340 Carc. 1B, H350 STOT RE 1, H372

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	: Call a physician immediately.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.
First-aid measures after skin contact	: Wash skin with plenty of water. Remove/Take off immediately all contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.

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First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Rinse mouth. Call a physician immediately.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.

5.2. Specific hazards arising from the chemical

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Mechanically recover the product. Notify authorities if product enters sewers or public waters.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Wear personal protective equipment. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing.
Hygiene measures : Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Acrylamide, Chemzymes Ultra Pure® (79-06-1)		
ACGIH	ACGIH TWA (mg/m ³)	0.03 mg/m ³ (inhalable fraction and vapor)
OSHA	OSHA PEL (TWA) (mg/m ³)	0.3 mg/m ³
OSHA	Limit value category (OSHA)	prevent or reduce skin absorption
IDLH	US IDLH (mg/m ³)	60 mg/m ³

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Acrylamide, Chemzymes Ultra Pure® (79-06-1)		
NIOSH	NIOSH REL (TWA) (mg/m ³)	0.03 mg/m ³

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Wear respiratory protection

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid
Appearance : White crystalline solid.
Colour : white
Odour : odourless
Odour threshold : No data available
pH : No data available
Melting point : 84.5 °C
Freezing point : Not applicable
Boiling point : 192.6 °C (at 1013.25 hPa)
Flash point : Not applicable
Relative evaporation rate (butylacetate=1) : No data available
Flammability (solid, gas) : Non flammable.
Vapour pressure : 20 hPa (at 20 °C)
Relative vapour density at 20 °C : No data available
Relative density : Not applicable
Density : 1.127 g/cm³ (at 25 °C)
Solubility : Water: 2040 g/l (at 25 °C)
Log Pow : -1.24
Auto-ignition temperature : Not applicable
Decomposition temperature : No data available
Viscosity, kinematic : Not applicable
Viscosity, dynamic : No data available
Explosive limits : Not applicable
Explosive properties : No data available
Oxidising properties : No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

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10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Toxic if swallowed. Dermal: Toxic in contact with skin. Inhalation:dust,mist: Harmful if inhaled.

Acrylamide, Chemzymes Ultra Pure® (79-06-1)	
LD50 oral rat	124 mg/kg
LD50 dermal rat	400 mg/kg
ATE US (oral)	124.000 mg/kg bodyweight
ATE US (dermal)	400.000 mg/kg bodyweight
ATE US (dust,mist)	1.500 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitisation : May cause an allergic skin reaction.
Germ cell mutagenicity : May cause genetic defects.
Carcinogenicity : May cause cancer.

Acrylamide, Chemzymes Ultra Pure® (79-06-1)	
IARC group	2A - Probably carcinogenic to humans
National Toxicity Program (NTP) Status	1 - Evidence of Carcinogenicity, 3 - Reasonably anticipated to be Human Carcinogen
In OSHA Hazard Communication Carcinogen list	Yes

Reproductive toxicity : Not classified
Specific target organ toxicity (single exposure) : Not classified
Specific target organ toxicity (repeated exposure) : Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard : Not classified
Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Acrylamide, Chemzymes Ultra Pure® (79-06-1)	
LC50 fish 1	103 - 115 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	98 mg/l (Exposure time: 48 h - Species: Daphnia magna)
LC50 fish 2	124 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 2	98 mg/l (Exposure time: 48 h - Species: Daphnia magna [Flow through])

12.2. Persistence and degradability

No additional information available

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12.3. Bioaccumulative potential

Acrylamide, Chemzymes Ultra Pure® (79-06-1)

Log Pow	-1.24
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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Regional legislation (waste) : U.S. - RCRA (Resource Conservation & Recovery Act) - Basis for Listing - Appendix VII. U.S. - RCRA (Resource Conservation & Recovery Act) - Hazardous Constituents - Appendix VIII to 40 CFR 261. U.S. - RCRA (Resource Conservation & Recovery Act) - Phase 4 LDR Rule - Universal Treatment Standards. U.S. - RCRA (Resource Conservation & Recovery Act) - U Series Wastes - Acutely Toxic Wastes & Other Hazardous Characteristics.

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN2074 Acrylamide, solid, 6.1, III

UN-No.(DOT) : UN2074

Proper Shipping Name (DOT) : Acrylamide, solid

Class (DOT) : 6.1 - Class 6.1 - Poisonous materials 49 CFR 173.132

Packing group (DOT) : III - Minor Danger

Hazard labels (DOT) : 6.1 - Poison



DOT Packaging Non Bulk (49 CFR 173.xxx) : 213

DOT Packaging Bulk (49 CFR 173.xxx) : 240

DOT Special Provisions (49 CFR 172.102) : IB8 - Authorized IBCs: Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N); Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2); Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2); Fiberboard (11G); Wooden (11C, 11D and 11F); Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 or 13M2).
IP3 - Flexible IBCs must be sift-proof and water-resistant or must be fitted with a sift-proof and water-resistant liner.
T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2)
TP33 - The portable tank instruction assigned for this substance applies for granular and powdered solids and for solids which are filled and discharged at temperatures above their melting point which are cooled and transported as a solid mass. Solid substances transported or offered for transport above their melting point are authorized for transportation in portable tanks conforming to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II, unless a tank with more stringent requirements for minimum shell thickness, maximum allowable working pressure, pressure-relief devices or bottom outlets are assigned in which case the more stringent tank instruction and special provisions shall apply. Filling limits must be in accordance with portable tank special provision TP3. Solids meeting the definition of an elevated temperature material must be transported in accordance with the applicable requirements of this subchapter.

DOT Packaging Exceptions (49 CFR 173.xxx) : 153

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 100 kg

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 200 kg

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DOT Vessel Stowage Location	: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other	: 12 - Keep as cool as reasonably practicable, 25 - Shade from radiant heat
Emergency Response Guide (ERG) Number	: 153P
Other information	: No supplementary information available.

Transportation of Dangerous Goods

Not applicable

Transport by sea

Not regulated

Air transport

Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

Acrylamide, Chemzymes Ultra Pure® (79-06-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on the United States SARA Section 302
Subject to reporting requirements of United States SARA Section 313

CERCLA RQ	5000 lb
Section 302 EPCRA Reportable Quantity (RQ)	5000 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	1000 - 10000 lb
SARA Section 313 - Emission Reporting	0.1 %

15.2. International regulations

CANADA

Acrylamide, Chemzymes Ultra Pure® (79-06-1)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

Acrylamide, Chemzymes Ultra Pure® (79-06-1)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Acrylamide, Chemzymes Ultra Pure® (79-06-1)

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Japanese Poisonous and Deleterious Substances Control Law
Japanese Pollutant Release and Transfer Register Law (PRTR Law)
Listed on the Canadian IDL (Ingredient Disclosure List)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on Turkish inventory of chemical
Taiwan Chemical Substance Inventory

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15.3. US State regulations

Acrylamide, Chemzymes Ultra Pure® (79-06-1)	
U.S. - California - Proposition 65 - Carcinogens List	Yes
U.S. - California - Proposition 65 - Developmental Toxicity	Yes
U.S. - California - Proposition 65 - Reproductive Toxicity - Female	No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Yes
No significance risk level (NSRL)	0.2 µg/day
State or local regulations	U.S. - Massachusetts - Right To Know List U.S. - New Jersey - Right to Know Hazardous Substance List U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Revision date : 06/07/2017

Full text of H-statements:

H301	Toxic if swallowed
H311	Toxic in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H340	May cause genetic defects
H350	May cause cancer
H372	Causes damage to organs through prolonged or repeated exposure

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product