



Section 1: Identification

PRODUCT AND COMPANY INFORMATION

Product Name: Acrylonitrile Molecular Formula: C<sub>3</sub>H<sub>3</sub>N  
Catalog Number(s): M-156  
Company: Scientific Polymer Products, Inc.  
6265 Dean Parkway  
Ontario, NY 14519  
Telephone: 585/265-0413  
Fax: 585/265-1390  
Website: www.scipoly.com  
Emergency Phone Number: 800-255-3924 (CHEM TEL)

Section 2: Hazards Identification

Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Flammable liquids, Category 2, H225  
Acute toxicity, Oral, Category 2, H301  
Acute toxicity, Inhalation, Category 3, H331  
Acute toxicity, Dermal (Category 3), H311  
Skin irritation, Category 2, H315  
Serious eye damage, Category 1, H318  
Skin sensitization, Category 1, H317  
Carcinogenicity, Category 2, H351  
Reproductive toxicity, Category 2, H361  
Specific target organ toxicity- single exposure, Category 3, Respiratory system, H335  
Acute aquatic toxicity, Category 2, H401  
Chronic aquatic toxicity, Category 2, H411

GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H225 Highly flammable liquid and vapor.  
H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H335 May cause respiratory irritation.  
H351 Suspected of causing cancer.  
H361 Suspected of damaging fertility or the unborn child.  
H411 Toxic to aquatic life with long lasting effects.

Precautionary statement(s)	
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ ventilating/lighting/equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264	Wash skin 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 should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310+P330	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Rinse mouth.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304+P340+P311	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor.
P305+P351+P338+P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P362	Take off contaminated clothing and wash before reuse.
P370+P378	In case of fire: Use dry sand, dry chemical or alcohol resistant foam to extinguish.
P391	Collect spillage.
P403+P233	Store in a well ventilated place. Keep container tightly closed.
P403+P235	Store in a well ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

**Hazards not otherwise classified (HNOC) or not covered by GHS – none**

To the best of our knowledge, the toxicological properties of this chemical have not been thoroughly investigated. Use appropriate procedures and precautions to prevent or minimize exposure.

**Section 3: Composition/Information on Ingredients**

Ingredient	CAS Number	Concentration (%)
Acrylonitrile	107-13-1	100

**Section 4: First Aid Measures**

**Description of first aid measures**

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

**In case of eye contact**

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician

**Most important symptoms and effects, both acute and delayed**

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

**Indication of any immediate medical attention and special treatment needed**

No data available

**Section 5: Fire-Fighting Measures****Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special hazards arising from the substance or mixture**

No data available

**Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

**Further information**

No data available

**Section 6: Accidental Release Measures****Personal precautions, protective equipment and emergency procedures**

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. For personal protection see section 8.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided

**Methods and materials for containment and cleaning up**

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations. Keep in suitable, closed containers for disposal.

**Reference to other sections**

For disposal see section 13.

**Section 7: Handling and Storage****Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Use explosion proof equipment. Keep away from sources of ignition- No smoking. Take measures to prevent the buildup of electrostatic charge. For precautions see section 2.

**Conditions for safe storage, including any incompatibilities**

Keep container tightly closed in a dry and well ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Light sensitive.

Storage class (TRGS 510): Flammable liquids

**Specific end use(s)**

Laboratory chemicals, Manufacture of substances

## Section 8: Exposure Controls/Personal Protection

### Control parameters

#### Components with workplace control parameters

Component	CAS No.	Value	Control parameters	Basis
Acrylonitrile	107-13-1	TWA	2 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Central Nervous System impairment Lower Respiratory Tract irritation Confirmed animal carcinogen with unknown relevance to humans Danger of cutaneous absorption		
		TWA	1 ppm	USA. NIOSH Recommended Exposure Limits
		Potential Occupational Carcinogen See Appendix A Potential for dermal absorption 15 minute ceiling value		
		C	10 ppm	USA. NIOSH Recommended Exposure Limits
		Potential Occupational Carcinogen See Appendix A Potential for dermal absorption 15 minute ceiling value		
		Substance listed; for more information see OSHA document 1910.1045		
		See 1910.1045		

### Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

##### Eye/face protection

Face shield (8-inch minimum) and tightly fitting safety goggles. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

##### Body Protection

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

##### Respiratory protection

Where risk assessment shows air purifying respirators are appropriate use a full face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

##### Control of environmental exposure

Prevent further leakage of spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

## Section 9: Physical and Chemical Properties

### Information on basic physical and chemical properties

a)	Appearance	Form: Liquid
b)	Odor	No data available
c)	Odor Threshold	No data available
d)	pH	No data available
e)	Melting point/freezing point	-83° C (-117° F)
f)	Initial boiling point and boiling range	77° C (171° F)
g)	Flash point	-5° C (23° F)- Closed cup
h)	Evaporation rate	No data available
i)	Flammability (solid, gas)	No data available
j)	Flammability or explosive limits	
	Upper	No data available
	Lower	No data available
k)	Vapor pressure	No data available
l)	Vapor density	No data available
m)	Relative density	0.806 g/cm <sup>3</sup>
n)	Water solubility	Soluble
o)	Partition coefficient: n- octanol/water	No data available
p)	Auto-ignition temperature	No data available
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	No data available

### Other safety information

No data available

## Section 10: Stability and Reactivity

### Reactivity

No data available

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

Vapors may form explosive mixture with air

### Conditions to avoid

Heat, flames and sparks

### Incompatible materials

Oxidizing agents, Copper

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions- Carbon oxides, Nitrogen oxides (NO<sub>x</sub>)

Other decomposition products- no data available

In the event of fire: see section 5

## Section 11: Toxicological Information

### Acute toxicity

LD50 Oral- Rat- 81 mg/kg

LC50 Inhalation- Rat-male- 4 h- > 2.09 mg/l

LD50 Dermal-Rabbit-226 mg/kg

**Skin Corrosion/Irritation**

Skin-Rabbit

Result: Skin irritation

(OECD Test Guideline 404)

**Serious Eye Damage/Eye Irritation**

Eyes-Rabbit

Result: Risk of serious damage to eyes

**Respiratory or Skin Sensitization**

Maximization Test- Guinea pig

Result: May cause sensitization by skin contact.

(OECD Test Guideline 406)

**Germ Cell Mutagenicity**

No data available

**Carcinogenicity:**

Possible human carcinogen

IARC: 2B- Group 2b: Possibly carcinogenic to humans (Acrylonitrile)

NTP: Reasonably anticipated to be a human carcinogen (Acrylonitrile)

OSHA: OSHA specifically regulated carcinogen (Acrylonitrile).

**Reproductive Toxicity**

Suspected human reproductive toxicant

**Specific Target Organ Toxicity – Single Exposure**

May cause respiratory irritation

**Specific Target Organ Toxicity – Repeated Exposure**

No data available

**Aspiration Hazard**

No data available

**Additional Information:**

RTECS: AT5250000

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes and skin.  
Cough, shortness of breath, Headache, Nausea

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Section 12: Ecological Information****Toxicity**

Toxicity to daphnia EC50- Daphnia magna (Water flea)- 7.4 - 10 mg/l - 48 h  
And other aquatic  
Invertebrates

**Persistence & Degradability**

Biodegradability Biotic/ Aerobic – Exposure time 28 d

**Bioaccumulation Potential**

Bioaccumulation Lepomis macrochirus– 14 d  
-9.94 µg/l

Bioconcentration factor (BCF): 48

**Mobility in Soil**

No data available

**Results of PBT and vPvB Assessment:**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

**Other Adverse Effects**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life with long lasting effects.

**Section 13: Disposal Considerations****Waste treatment methods****Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**

Dispose of as unused product.

**Section 14: Transport Information****DOT (US)**

UN number: 1093	Class: 3(6.1)	Packing group: I
Proper shipping name: Acrylonitrile, stabilized		
Reportable Quantity (RQ): 100 lbs		
Poison Inhalation Hazard: No		

**IMDG**

UN number: 1093	Class: 3(6.1)	Packing group: I
Proper shipping name: Acrylonitrile, stabilized		
Marine pollutant: Yes		

**IATA**

UN number: 1093	Class: 3(6.1)	Packing group: I
Proper shipping name: Acrylonitrile, stabilized		
IATA Passenger: Not permitted for transport		

**Section 15: Regulatory Information****SARA 302 Components**

The following components are subject to reporting levels established by SARA Title III, Section 302:

	CAS No.
Acrylonitrile	107-13-1

**SARA 313 Components**

The following components are subject to reporting levels established by SARA Title III, Section 313:

	CAS No.
Acrylonitrile	107-13-1

**SARA 311/312 Hazards**

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right to Know Components**

	CAS No.
Acrylonitrile	107-13-1

**Pennsylvania Right to Know Components**

	CAS No.
Acrylonitrile	107-13-1

**New Jersey Right to Know Components**

Acrylonitrile

CAS No.  
107-13-1**California Prop. 65 Components**

Warning! This product contains a chemical known to the State of California to cause cancer.

Acrylonitrile

CAS No.  
107-13-1**Section 16: Other Information****HMIS Rating**Health: 2  
Flammability: 3  
Reactivity: 0**NFPA Rating**Health: 2  
Flammability: 3  
Reactivity: 0

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