

Preparation Date 9/25/2014

Latest Revision Date (If Revised) 10/11/2017

SDS Expiry Date 10/9/2020

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Chemical Name Acrylamide

Catalogue # A191300

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Product Uses To be used only for scientific research and development. Not for use in humans or animals.

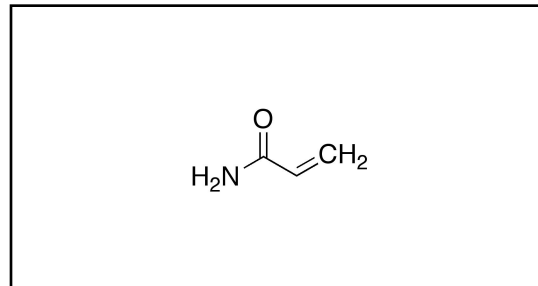
1.3 Details of the Supplier of the Safety Data Sheet

Company Toronto Research Chemicals
2 Brisbane Road
Toronto, ON M3J 2J8
CANADA

Telephone +14166659696

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Email orders@trc-canada.com



1.4 Emergency Telephone Number

Emergency# +1(416) 665-9696 between 0800-1700 (GMT-5)

2. HAZARDS IDENTIFICATION

WHMIS Classification (Canada)

- D1B Toxic Material Causing Immediate and Serious Toxic Effects
Toxic by Ingestion
- D2A Very Toxic Material Causing Other Toxic Effects
Carcinogen/Reproductive Hazard
- D2B Toxic Material Causing Other Toxic Effects
Moderate Skin/Eye Irritant
Skin Sensitizer
Mutagen

WHMIS Symbols (Canada)



2.1/2.2 Classification of the Substance or Mixture and Label Elements

GHS Hazards Classification (According to EU Regulation 1272/2008 and US OSHA 1910.1200)

- Acute Toxicity, Oral (Category 3)
Acute Toxicity, Inhalation (Category 4)
Acute Toxicity, Dermal (Category 4)
Skin Irritation (Category 2)
Serious Eye Irritation (Category 2A)
Sensitisation, Skin (Category 1)
Germ Cell Mutagenicity (Category 1B)
Carcinogenicity (Category 1B)
Reproductive Toxicity (Category 2)
Hazardous to the Aquatic Environment, Acute Hazard (Category 3)

GHS Hazards Identification (According to EU Regulation 1272/2008 and US OSHA 1910.1200)

Signal Word Danger



GHS Hazard Statements

H301	Toxic if swallowed.
H332	Harmful if inhaled.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H340	May cause genetic defects.
H350	May cause cancer.
H361	Suspected of damaging fertility or the unborn child.
H402	Harmful to aquatic life.

GHS Precautionary Statements

P201	Obtain special instructions before use.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301/P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
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.

2.3 Unclassified Hazards/Hazards Not Otherwise Classified

No data available.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Molecular Formula: C₃H₅NO

Molecular Weight: 71.08

CAS Registry #: 79-06-1

EC#: 201-173-7

Synonyms

2-Propenamide; Acrylic Amide; Bio-Acrylamide 50; Ethylenecarboxamide; NSC 7785; Propenamide; Vinyl Amide;

3.2 Mixtures

Not a mixture.

4. FIRST AID MEASURES

4.1 Description of First Aid Measures

General Advice

If medical attention is required, show this safety data sheet to the doctor.

If Inhaled

If inhaled, move casualty to fresh air. If not breathing, give artificial respiration and consult a physician.

In Case of Skin Contact

Remove contaminated clothing and shoes. 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. Continue rinsing eyes during transport to hospital.

If Swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Do NOT induce vomiting unless advised to do so by a physician or Poison Control Center. Seek medical attention.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed

The most important known symptoms and effects are described in the labeling (see section 2.2) and/or section 11.

4.3 Indication of any Immediate Medical Attention and Special Treatment Needed

No data available.

5. FIREFIGHTING MEASURES

5.1 Extinguishing Media

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

5.2 Special Hazards Arising from the Substance or Mixture

Nitrogen oxides, Carbon oxides

5.3 Advice for Firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further Information

No data available.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Method and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place. Keep in a dry place.

Storage conditions: -20°C Freezer

7.3 Specific End Uses

For scientific research and development only. Not for use in humans or animals.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

Components with workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
Acrylamide	79-06-1	TWA	0.030000 mg/m3	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)

Remarks Substance may be readily absorbed through intact skin

TWAEV 0.03 ppm Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants

A substance to which exposure must be reduced to a minimum in accordance with section 42
Skin (percutaneous)
Carcinogenic effect suspected in humans

TWA 0.030000 mg/m3 USA. ACGIH Threshold Limit Values (TLV)

Central Nervous System impairment

Confirmed animal carcinogen with unknown relevance to humans
Danger of cutaneous absorption

TWA 0.030000 mg/m3 Canada. British Columbia OEL

IARC '2A' applies to substances deemed probably carcinogenic to humans on the basis of limited evidence of carcinogenicity in humans.
Contributes significantly to the overall exposure by the skin route.
Vapour and aerosol.

TWAEV 0.030000 mg/m3 Canada. Ontario OELs

Skin

8.2 Exposure Controls

Appropriate Engineering Controls

A laboratory fumehood or other appropriate form of local exhaust ventilation should be used to avoid exposure.

Personal Protective Equipment

All recommendations below are advisory in nature and a risk assessment should be performed by the employer/end user prior to use of this product. The type of protective equipment must be selected based on the amount and concentration of the dangerous material being used in the workplace.

Eye/Face Protection

Safety goggles or face shield. All equipment should have been tested and approved under appropriate standards, such as NIOSH (US), CSA (Canada), or EN 166 (EU).

Skin Protection

Gloves should be used when handling this material. Gloves are to be inspected prior to use. Contaminated gloves are to be removed using proper glove removal technique so that the outer surface of the glove does not contact bare skin. Dispose of contaminated gloves after use in compliance with good laboratory practices and local requirements.

Gloves used for incidental exposures (splash protection) should be designated as "chemical resistant" by EU standard EN 374 with the resistance codes corresponding to the anticipated use of the material. Unrated gloves are not recommended.

Suggested gloves: AnsellPro Sol-Vex nitrile gloves style 37-175, 15 mil thickness.
Penetration time has not been determined.

Gloves used for prolonged direct exposure (immersion) should be designated "chemical resistant" as per EN 734 with the resistance codes corresponding to the anticipated use of the material.

Suggested gloves: AnsellPro Viton/Butyl gloves style 38-612, 4/8 mil thickness.
Penetration time has not been determined.

These recommendations may not apply if the material is mixed with any other chemical, or dissolved into a solution. A risk assessment must be performed to ensure the gloves will still offer acceptable protection.

Body Protection

Fire resistant (Nomex) coveralls or chemical-resistant bodysuit (laminated Tychem SL or equivalent).

Respiratory Protection

Recommended respirators are NIOSH-approved N100 or CEN-approved FFP3 particulate respirators. These are to be only used as a backup to local exhaust ventilation or other engineering controls. If the respirator is the only means of protection, a full-face supplied air respirator must be used.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties

A) Appearance

White to Off-White Solid

B) Odour

No data available

C) Odour Threshold

No data available

D) pH

No data available

E) Melting Point/Freezing Point

F) Initial Boiling Point/Boiling Range

76-78°C

G) Flash point

No data available

I) Flammability (Solid/Gas)

No data available

K) Vapour Pressure

No data available

M) Relative Density

No data available

O) Partition Coefficient: n-octanol/water

No data available

Q) Decomposition Temperature

No data available

S) Explosive Properties

No data available

No data available

H) Evaporation Rate

No data available

J) Upper/Lower Flammability/Explosive Limits

No data available

L) Vapour Density

No data available

N) Solubility

Methanol, Water

P) Auto-Ignition Temperature

No data available

R) Viscosity

No data available

T) Oxidizing Properties

No data available

9.2 Other Information

no data available

10. STABILITY AND REACTIVITY

10.1 Reactivity

No data available.

10.2 Chemical Stability

Stable under recommended storage conditions.

10.3 Possibility of Hazardous Reactions

No data available.

10.4 Conditions to Avoid

No data available.

10.5 Incompatible Materials

Acids, Oxidizing agents, Iron and iron salts, Copper, Brass, Free radical initiators.

10.6 Hazardous Decomposition Products

In the event of fire: See section 5. **Other decomposition products:** No data available.

11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

A) Acute Toxicity

Oral LD50: Rat - 124 mg/kg

Inhalation LC50: Rat - 177 mg/kg

Dermal LD50: Rabbit - 1,141 mg/kg

B) Skin Corrosion/Irritation

Moderate skin irritant.

C) Serious Eye Damage/Irritation

Moderate eye irritant.

D) Respiratory or Skin Sensitization

May cause an allergic skin reaction.

E) Germ Cell Mutagenicity

Probable human mutagen. Laboratory results have shown mutagenicity in several model systems (including human).

F) Carcinogenicity

Probable human carcinogen.

This compound has been designated by the IARC as Group 2A: Probably carcinogenic to humans.

G) Reproductive Toxicity/Teratogenicity

Laboratory results have shown reproductive toxicity/teratogenicity in animal models.

H) Single Target Organ Toxicity - Single Exposure

No data available

I) Single Target Organ Toxicity - Repeated Exposure

No data available

J) Aspiration Hazard

No data available

K) Potential Health Effects and Routes of Exposure

Inhalation

Harmful if inhaled. May cause respiratory tract irritation.

Ingestion

Toxic if swallowed.

Skin

Harmful if absorbed through skin. Causes skin irritation.

Eyes

Causes eye irritation.

L) Signs and Symptoms of Exposure

The most important known symptoms and effects are described in the labeling (see section 2.2) and/or section 11.

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

M) Additional Information

RTECS: AS3325000

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish

LC50 - Pimephales promelas (fathead minnow) - 90 mg/l - 96 h
NOEC - Cyprinus carpio (Carp) - 5 mg/l - 28 d

Toxicity to daphnia and other aquatic invertebrates

mortality NOEC - Daphnia magna (Water flea) - 60 mg/l - 48 h
EC50 - Daphnia magna (Water flea) - 160 mg/l - 48 h

12.2 Persistence and Degradability

Result: 100 % - Readily biodegradable
Method: OECD Test Guideline 301D

12.3 Bioaccumulative Potential

Oncorhynchus mykiss (rainbow trout) - 72 h
Bioconcentration factor (BCF): 1.65

12.4 Mobility in Soil

No data available.

12.5 Results of PBT and vPvB Assessment

No data available.

12.6 Other Adverse Effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life.

13. DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

A) Product

Product may be burned in an incinerator equipped with afterburner and scrubber. Excess and expired materials are to be offered to a licensed hazardous material disposal company. Ensure that all Federal and Local regulations regarding the disposal and destruction of this material are followed.

B) Contaminated Packaging

Dispose of as above.

C) Other Considerations

Product is not to be disposed of in sanitary sewers, storm sewers, or landfills.

14. TRANSPORT INFORMATION

14.1 UN Number

DOT (US): UN2074

IATA: UN2074

IMDG: UN2074

ADR/RID: UN2074

14.2 UN Proper Shipping Name

DOT (US)/IATA:

Acrylamide, solid

IMDG/ARD/RID:

ACRYLAMIDE, SOLID

14.3 Transport Hazard Class(es)

DOT (US): 6.1	IATA: 6.1	IMDG: 6.1	ADR/RID: 6.1
14.4 Packing Group			
DOT (US): III	IATA: III	IMDG: III	ADR/RID: III
14.5 Environmental Hazards			
DOT (US): None	IATA: None	IMDG: None	ADR/RID: None
14.6 Special Precautions for User			
None			

15. REGULATORY INFORMATION

This safety data sheet complies with the requirements of WHMIS (Canada), OSHA 1910.1200 (US), and EU Regulation EC No. 1907/2006 (European Union).

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

A) Canada

DSL/NDSL Status: This product or a component of this product is registered on the Canadian DSL/NDSL.

B) United States

TSCA Status: This product or a component is listed on the US EPA TSCA.

C) European Union

ECHA Status: This product or a component is registered with the EU ECHA.

15.2 Chemical Safety Assessment

No data available

16. OTHER INFORMATION

16.1 Revision History

Original Publication Date: 9/25/2014

16.2 List of Abbreviations

LD50	Median lethal dose of a substance required to kill 50% of a test population.
LC50	Medial lethal concentration of a substance required to kill 50% of a test population.
LDLo	Lowest known lethal dose
TDLo	Lowest known toxic dose
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program
RTECS	Registry of Toxic Effects of Chemical Substances

16.3 Further Information

Copyright 2015. Toronto Research Chemicals Inc. Copies may be made for internal use only. The above information is believed to be correct to the best of our knowledge, but is to be only used as a guide. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Please take all due care when handling this product.