Safety Data Sheet

Acrylamide-2,3,3-d_3

Section 1. Chemical product and company identifications

Product code: D-5184
Chemical formula: $C_3H_2D_3NO$
CAS: 122775-19-3
CAS (unlabelled): 79-06-1
Synonyms: Acrylic Acid Amide, 2-Propenamide

Supplier / Manufacturer:

C/D/N Isotopes Inc.
88 Leacock Street
Pointe-Claire (Québec) H9R 1H1
Phone: 514-697-6254
Toll-Free (Canada & USA): 1-800-565-4696
Fax: 514-697-6148
Website: www.cdnisotopes.com

In case of emergency:

TOXYSCAN HOTLINE: 1-855-780-0599

Section 2. Hazards identifications

Physical state: Solid
Warning: Toxic if swallowed. Harmful in contact with skin or if inhaled. Causes serious eye irritation.
Routes of entry: Inhalation, skin and eyes

GHS (Globally Harmonized System of Classification and Labelling of Chemicals):

GHS Classification:
- Acute toxicity, Oral (Category 3)
- Acute toxicity, Inhalation (Category 4)
- Acute toxicity, Dermal (Category 4)
- Skin irritation (Category 2)
- Eye irritation (Category 2A)
- Skin sensitisation (Category 1)
- Germ cell mutagenicity (Category 1B)
- Carcinogenicity (Category 1B)
- Reproductive toxicity (Category 2)
- Specific target organ toxicity - repeated exposure, Oral (Category 1), Peripheral nervous system

GHS Label elements:
- Pictograms: 
- Signal word: Danger

Hazards statement:
- H301 Toxic if swallowed.
- H312 + H332 Harmful in contact with skin or if inhaled
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H340 May cause genetic defects.
- H350 May cause cancer.
- H361 Suspected of damaging fertility or the unborn child.
- H372 Causes damage to organs (Peripheral nervous system) through prolonged or repeated exposure if swallowed.

Precautionary statement:
- P280 Wear protective gloves/ protective clothing.
- 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

Section 3. Composition and information on ingredients

Name	CAS	Concentration %
Acrylamide-2,3,3-d_3	122775-19-3	> 98

Section 4. First aid measures

Eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin contact: Wash off with soap and plenty of water. Consult a physician.
Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Ingestion: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Section 5. Firefighting measures

Flammability of the product: Not flammable or combustible.
Lower explosion limit: No data available
Upper explosion limit: No data available
Auto-ignition temperature: No data available
Flash point: 138 °C (280 °F) - closed cup
Products of combustion: Hazardous decomposition products formed under fire conditions: Carbon oxides, nitrogen oxides.
Firefighting media and instructions: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

Section 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. Discharge into the environment must be avoided.
Methods for cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Section 7. Handling and storage

Handling: Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.
Storage: Store at room temperature. Adequate ventilation. Protect from heat and light. Protect from polymerization initiators.

Section 8. Exposure Controls, Personal Protections

Engineering controls: Use mechanical exhaust or laboratory fumehood to avoid exposure.
Eyes: Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Respiratory: 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).
Hands: Handle with gloves. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Skin/body: Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Section 9. Physical and chemical properties (unlabelled)

Molecular weight: 71.08 g/mol
Physical status: Solid
Color: White to off-white
Odour: No data available
Density: No data available
Melting point: 82 - 86 °C (180 - 187 °F) - lit
Boiling point: 125 °C (257 °F) at 33 hPa (25 mmHg) - lit.
Vapour pressure: 0.04 hPa (0.03 mmHg) at 40 °C (104 °F), 0.009 hPa (0.00675 mmHg) at 25 °C (77 °F)
Vapour density: 2.45 (Air = 1)
Partition coefficient (octanol/water): log Pow: -0.67
Water solubility: Soluble

Section 10. Stability and reactivity

Stability and reactivity: Stable under recommended storage conditions.
Incompatibility: Acids, oxidizing agents, iron and iron salts, copper, brass, free radical initiators.
Products of combustion: Hazardous decomposition products formed under fire conditions: Carbon oxides, nitrogen oxides.
Reactivity conditions: No data available.

Section 11. Toxicological information (unlabelled)

Toxicological data: Acrylamide

Information on ingredients:

Name	CAS	LD_{50}	LC_{50}
Acrylamide	79-06-1	Oral - Rat - 124 mg/kg Dermal - Rat - 400 mg/kg	Inhalation - Rat - 4 h - > 1,500 mg/m^3

Potential acute effects

- **Eyes:** Causes eye irritation.
- **Skin:** Causes skin irritation.
- **Inhalation:** Toxic if inhaled. Causes respiratory tract irritation.
- **Ingestion:** Toxic if swallowed.

Potential chronic effects

- **Carcinogenic effects:** This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification. Possible human carcinogen. IARC: 2A - Group 2A: Probably carcinogenic to humans (Acrylamide).
- **Mutagenic effects:** May alter genetic material. In vivo tests showed mutagenic effects.
- **Teratogenic effects:** Animal testing did not show any effects on foetal development.
- **Medical conditions aggravated by overexposure:** No data available.

Section 12. Ecological information

Ecological data:

Name	Results	Species	Period
Acrylamide	90 mg/l LC50	Pimephales promelas	96 h
	5 mg/l NOEC	Cyprinus carpio	28 d
	60 mg/l NOEC	Daphnia magna	48 h
	160 mg/l EC50	Daphnia magna	48 h

Effects on environment: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Mobility: No data available.
Environmental precautions: No data available
Persistence and degradability: Result: 100 % - Readily biodegradable. Method: OECD Test Guideline 301D.
Bioaccumulative potential: Oncorhynchus mykiss (rainbow trout) - 72 h. Bioconcentration factor (BCF): 1.65.

Section 13. Disposal considerations

Waste disposal: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Section 14. Transportation information

Classification DOT/IMDG/IATA label:

Shipping name: Acrylamide, solid
UN number: UN2074
Class: 6.1
Packaging group: III

Additional information: None

Section 15. Regulatory information

UNITED STATES:
NFPA classification

Health: 2
Flammable: 1
Reactivity: 0
Specials conditions: None

Legend: 4: Severe, 3: High, 2: Moderate, 1: Slightly, 0: Not hazardous

U.S. Federal regulations:

TSCA 8(b) inventory: Acrylamide
SARA 302/304/311/312 extremely hazardous substances: Not Listed
SARA 302/304 emergency planning and notification: Not Listed
SARA 302/304/311/312 hazardous chemicals: Not Listed
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard: Listed
CWA (Clean Water Act) 307: Not Listed
CWA (Clean Water Act) 311: Not Listed
CAA (Clean Air Act) 112 accidental release prevention: Not Listed
CAA (Clean Air Act) 112 regulated flammable substances: Not Listed
CAA (Clean Air Act) 112 regulated toxic substances: Not Listed

State regulations:

DEA List I Chemicals (Precursor Chemicals): Not Listed
DEA List II Chemicals (Essential Chemicals): Not Listed
Substances in Massachusetts: Listed
Dangerous substances in New Jersey: Listed
New York – Dangerous substances with acute effects: Not Listed
Dangerous substances in Pennsylvania – right to know: Listed

WHMIS (Canada):

D1B - Toxic material causing immediate and serious toxic effects

D2A - Very toxic material causing other toxic effects
D2B - Toxic material causing other toxic effects

Section 16. Additional information

References:

- ANSI Z400.1, MSDS Standard, 2001.
- Manufacturer's Material Safety Data Sheet.
- 29CFR Part1910.1200 OSHA MSDS Requirements.
- 49CFR Table List of Hazardous Materials, UN#, Proper Shipping Names, PG. -Canada
- Gazette Part II, Vol. 122, No. 2 Registration SOR/88-64 31 December, 1987 Hazardous Products Act "Ingredient Disclosure List".
- Federal act on the controlled products
- Canadian Transport of Dangerous Goods, Regulations and Schedules, Clear Language version 2002.
- Toxicological repertory, HSC.
- Material safety data sheet from the components.

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Elaborated by: **Toxyscan Inc., 1-866-780-0599**
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