

SECTION 1: Identification

1.1. Identification

Product form	: Substance
Trade name	: N-vinyl acetamide (NVA)
CAS-No.	: 5202-78-8
Product code	: 24806
Formula	: C4H7NO

1.2. Recommended use and restrictions on use

Recommended use	: Use as laboratory reagent, Manufacture of substances
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1.3. Supplier

Supplier

Polysciences
400 Valley Road
Warrington, PA 18976 - United States
T +1 215 343 6484 - F +1 215 343 0214
info@polysciences.com - www.polysciences.com

1.4. Emergency telephone number

Emergency number	: 24-hour emergency phone number ChemTel 1-800-255-3924
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SECTION 2: Hazard(s) identification


2.1. Classification of the substance or mixture

GHS US classification

Acute toxicity (inhalation) Category 4	Harmful if inhaled
Skin corrosion/irritation Category 2	Causes skin irritation
Serious eye damage/eye irritation Category 2B	Causes eye irritation

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US)	: 
Signal word (GHS US)	: Warning
Hazard statements (GHS US)	: Causes skin irritation Causes eye irritation Harmful if inhaled
Precautionary statements (GHS US)	: Avoid breathing dust/fume/gas/mist/vapors/spray. Wash hands, forearms and face thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection. If on skin: Wash with plenty of water. If inhaled: Remove person to fresh air and keep comfortable for breathing.

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

Name	Product identifier	%	GHS US classification
N-vinyl acetamide (NVA)	(CAS-No.) 5202-78-8	90 – 98	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2B, H320

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Name	Product identifier	%	GHS US classification
Methyl alcohol	(CAS-No.) 67-56-1	0 – 1	Flam. Liq. 2, H225 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Acute Tox. 3 (Inhalation:vapour), H331 STOT SE 1, H370
Acetaldehyde	(CAS-No.) 75-07-0	0 – 1	Flam. Liq. 1, H224 Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 Muta. 2, H341 Carc. 1A, H350 STOT SE 3, H335 Aquatic Acute 2, H401

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/doctor/physician if you feel unwell.
- First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- 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.
- Symptoms/effects after eye contact : Mild eye irritation.

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

- Hazardous decomposition products in case of fire : Toxic fumes may be released.

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. Avoid breathing dust/fume/gas/mist/vapors/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.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Mechanically recover the product.

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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. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store at 4 deg. C. Store locked up. Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

N-vinyl acetamide (NVA) (5202-78-8)	
No additional information available	
Methyl alcohol (67-56-1)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (ppm)	200 ppm
ACGIH STEL (ppm)	250 ppm
ACGIH chemical category	Skin - potential significant contribution to overall exposure by the cutaneous route
USA - ACGIH - Biological Exposure Indices	
Biological Exposure Indices (BEI)	15 mg/l Parameter: Methanol - Medium: urine - Sampling time: end of shift (background, nonspecific)
USA - OSHA - Occupational Exposure Limits	
OSHA PEL (TWA) (mg/m ³)	260 mg/m ³
OSHA PEL (TWA) (ppm)	200 ppm
USA - IDLH - Occupational Exposure Limits	
US IDLH (ppm)	6000 ppm
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL (TWA) (mg/m ³)	260 mg/m ³
NIOSH REL TWA [ppm]	200 ppm
NIOSH REL (STEL) (mg/m ³)	325 mg/m ³
NIOSH REL STEL [ppm]	250 ppm
US-NIOSH chemical category	Potential for dermal absorption
Acetaldehyde (75-07-0)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Acetaldehyde
ACGIH Ceiling (ppm)	25 ppm
Remark (ACGIH)	TLV® Basis: Eye & URT irr. Notations: A2 (Suspected Human Carcinogen)
ACGIH chemical category	Suspected Human Carcinogen
Regulatory reference	ACGIH 2020
USA - OSHA - Occupational Exposure Limits	
Local name	Acetaldehyde
OSHA PEL (TWA) (mg/m ³)	360 mg/m ³
OSHA PEL (TWA) (ppm)	200 ppm
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
USA - IDLH - Occupational Exposure Limits	
US IDLH (ppm)	2000 ppm

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

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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:

In case of insufficient ventilation, wear suitable respiratory equipment. [In case of inadequate ventilation] wear respiratory protection.

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: White solid.
Color	: Mixture contains one or more component(s) which have the following colour(s): clear Colorless
Odor	: There may be no odour warning properties, odour is subjective and inadequate to warn of overexposure. Mixture contains one or more component(s) which have the following odour: alcohol-like Fruity
Odor threshold	: No data available
pH	: No data available
Melting point	: 54 °C C
Freezing point	: Not applicable
Boiling point	: 96 °C C
Flash point	: 226 °F F
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: no data
Relative vapor density at 20°C	: no data
Relative density	: No data available
Molecular mass	: 85.11
Solubility	: Water: 880 g/100ml
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: Not applicable
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

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SECTION 10: Stability and reactivity

10.1. Reactivity

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

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) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Harmful if inhaled.

N-vinyl acetamide (NVA) (5202-78-8)	
LD50 oral rat	1600 µg/kg mg/ 517 mg/kg

Methyl alcohol (67-56-1)	
LD50 oral rat	6200 mg/kg
LC50 Inhalation - Rat [ppm]	22500 ppm (Exposure time: 8 h)

Acetaldehyde (75-07-0)	
LD50 oral rat	660 mg/kg
LC50 Inhalation - Rat [ppm]	13000 ppm/4h

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes eye irritation.
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Acetaldehyde (75-07-0)	
IARC group	2B - Possibly carcinogenic to humans, 1 - Carcinogenic to humans
National Toxicity Program (NTP) Status	Reasonably anticipated to be Human Carcinogen
In OSHA Hazard Communication Carcinogen list	Yes

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

Methyl alcohol (67-56-1)	
STOT-single exposure	Causes damage to organs.

Acetaldehyde (75-07-0)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified
Viscosity, kinematic : No data available

Symptoms/effects after skin contact : Irritation.

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Symptoms/effects after eye contact : Mild eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

Methyl alcohol (67-56-1)

LC50 fish 1	28200 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
LC50 fish 2	> 100 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])

Acetaldehyde (75-07-0)

LC50 fish 1	28.0 – 34.0 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 Daphnia 1	3.64 – 6.15 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
LC50 fish 2	53 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
EC50 Daphnia 2	48.3 mg/l (Exposure time: 48 h - Species: Daphnia magna)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Methyl alcohol (67-56-1)

BCF fish 1	< 10
Partition coefficient n-octanol/water (Log Pow)	-0.77

Acetaldehyde (75-07-0)

Partition coefficient n-octanol/water (Log Pow)	0.5
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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

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

Not applicable

Transportation of Dangerous Goods

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

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SECTION 15: Regulatory information

15.1. US Federal regulations

N-vinyl acetamide (NVA) (5202-78-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

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Methyl alcohol (67-56-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Subject to reporting requirements of United States SARA Section 313

Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ	5000 lb
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Acetaldehyde (75-07-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Subject to reporting requirements of United States SARA Section 313

Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ	1000 lb
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15.2. International regulations

CANADA

N-vinyl acetamide (NVA) (5202-78-8)

Listed on the Canadian NDSL (Non-Domestic Substances List)

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Listed on the Canadian NDSL (Non-Domestic Substances List)

Methyl alcohol (67-56-1)

Listed on the Canadian DSL (Domestic Substances List)

Acetaldehyde (75-07-0)

Listed on the Canadian DSL (Domestic Substances List)

Toxic Substance (CEPA – Schedule I)	Yes
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EU-Regulations

Methyl alcohol (67-56-1)

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

National regulations

Methyl alcohol (67-56-1)

Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)

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 KECL/KECI (Korean Existing Chemicals Inventory)

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

Listed on INSQ (Mexican National Inventory of Chemical Substances)

Listed on CICR (Turkish Inventory and Control of Chemicals)

Listed on the TCSI (Taiwan Chemical Substance Inventory)

Acetaldehyde (75-07-0)

Listed as carcinogen on NTP (National Toxicology Program)

15.3. US State regulations

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Methyl alcohol (67-56-1)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
No	Yes	No	No		47000 µg/day inhalation

Acetaldehyde (75-07-0)					
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
Yes	No	No	No	90 µg/day (inhalation)	

Component	State or local regulations
Methyl alcohol(67-56-1)	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
Acetaldehyde(75-07-0)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

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Hazard Rating

- Health : 1 Slight Hazard - Irritation or minor reversible injury possible
- Flammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)
- Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

SDS US (GHS HazCom 2012)

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