

SAFETY DATA SHEET

1. Identification

Product identifier: Amyl Acetate (Mixed Isomers)

Other means of identification

Product No.: 9094

Recommended use and restriction on use

Recommended use: Not available.

Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information

Manufacturer

Company Name: Avantor Performance Materials, Inc.
Address: 3477 Corporate Parkway, Suite 200
Center Valley, PA 18034

Telephone: Customer Service: 855-282-6867

Fax:
Contact Person: Environmental Health & Safety
e-mail: info@avantormaterials.com

Emergency telephone number:

24 Hour Emergency: 908-859-2151

Chemtrec: 800-424-9300

2. Hazard(s) identification

Hazard Classification

Physical Hazards

Flammable liquids Category 3

Environmental Hazards

Chronic hazards to the aquatic environment Category 3

Label Elements

Hazard Symbol:



Signal Word: Warning

Hazard Statement: Flammable liquid and vapor.
Harmful to aquatic life with long lasting effects.

Precautionary Statement

Prevention: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Ground/bond container and receiving equipment. Use explosion-proof

electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment.

- Response:** IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
- Storage:** Store in a well-ventilated place. Keep cool.
- Disposal:** Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in GHS classification: None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%)*
N-AMYL ACETATE		628-63-7	60 - 100%
ISOAMYL ACETATE		123-92-2	5 - 10%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

- General information:** Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.
- Ingestion:** Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical attention if symptoms occur.
- Inhalation:** Move to fresh air. Get medical attention if symptoms persist.
- Skin Contact:** Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if irritation persists after washing. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.
- Eye contact:** Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if irritation persists after washing.

Most important symptoms/effects, acute and delayed

Symptoms: May cause skin and eye irritation.

Indication of immediate medical attention and special treatment needed

Treatment: Treat symptomatically. Symptoms may be delayed.

5. Fire-fighting measures

General Fire Hazards: Flammable liquid and vapor. In case of fire and/or explosion do not breathe fumes.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Water spray, foam, dry powder or carbon dioxide.

Unsuitable extinguishing media: Avoid water in straight hose stream; will scatter and spread fire. Water may be ineffective in fighting the fire.

Specific hazards arising from the chemical: Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Prevent buildup of vapors or gases to explosive concentrations. Heat may cause the containers to explode.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk.

Special protective equipment for fire-fighters: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep unauthorized personnel away. Keep upwind. Use personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. See Section 8 of the MSDS for Personal Protective Equipment.

Methods and material for containment and cleaning up: Eliminate all ignition sources if safe to do so. Take precautionary measures against static discharges. Stop leak if possible without any risk. Use only non-sparking tools. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.

Notification Procedures: Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.

Environmental Precautions: Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid release to the environment.

7. Handling and storage

Precautions for safe handling: DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Wear protective gloves/protective clothing/eye protection/face protection. Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. Wash hands thoroughly after handling.

Conditions for safe storage, including any incompatibilities: Keep cool. Keep container tightly closed in a cool, well-ventilated place. Ground container and transfer equipment to eliminate static electric sparks. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of flammable liquids.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
N-AMYL ACETATE	TWA	50 ppm	US. ACGIH Threshold Limit Values (2011)
	STEL	100 ppm	US. ACGIH Threshold Limit Values (2011)
	REL	100 ppm 525 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	100 ppm 525 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
ISOAMYL ACETATE	TWA	100 ppm 525 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	50 ppm	US. ACGIH Threshold Limit Values (2011)
	STEL	100 ppm	US. ACGIH Threshold Limit Values (2011)
	REL	100 ppm 525 mg/m ³	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	PEL	100 ppm 525 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	100 ppm 525 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)

Appropriate Engineering Controls

No data available.

Individual protection measures, such as personal protective equipment

General information: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.

Eye/face protection: Wear safety glasses with side shields (or goggles).

Skin Protection

Hand Protection: Chemical resistant gloves

Other: Wear suitable protective clothing.

Respiratory Protection: In case of inadequate ventilation use suitable respirator.

Hygiene measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Provide eyewash station and safety shower.

9. Physical and chemical properties

Appearance

Physical state: Liquid

Form: Liquid

Color: Colorless

Odor: Banana-like fruity odor

Odor threshold: No data available.

pH: No data available.

Melting point/freezing point: -70.8 °C

Initial boiling point and boiling range: 149.25 °C

Flash Point:	38 °C (Closed Cup)
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	7.5 %(V)
Flammability limit - lower (%):	1.1 %(V)
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density:	No data available.
Relative density:	0.88 (20 °C)
Solubility(ies)	
Solubility in water:	Slightly Soluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	379 °C
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	No dangerous reaction known under conditions of normal use.
Chemical Stability:	Material is stable under normal conditions.
Possibility of Hazardous Reactions:	Hazardous polymerization does not occur.
Conditions to Avoid:	Heat, sparks, flames. Contact with incompatible materials.
Incompatible Materials:	Strong oxidizing agents. Flammable/combustible material. Alkalies. Acids. Nitrates.
Hazardous Decomposition Products:	Fire or excessive heat may produce hazardous decomposition products. By heating and fire, harmful vapors/gases may be formed.

11. Toxicological information

Information on likely routes of exposure

Ingestion:	May be harmful if swallowed.
Inhalation:	May be harmful if inhaled.
Skin Contact:	May cause irritation.
Eye contact:	May irritate eyes.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral

Product:	No data available.
Specified substance(s): N-AMYL ACETATE	LD 50 (Rat): 6,500 mg/kg
Specified substance(s): ISOAMYL ACETATE	LD 50 (Rabbit): 7,400 mg/kg

Dermal

Product: No data available.

Inhalation Product: No data available.

Repeated Dose Toxicity Product: No data available.

Skin Corrosion/Irritation Product: May cause skin irritation.

Serious Eye Damage/Eye Irritation Product: May irritate eyes.

Respiratory or Skin Sensitization Product: Not a skin sensitizer.

Carcinogenicity Product: This substance has no evidence of carcinogenic properties.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):
No carcinogenic components identified

Germ Cell Mutagenicity

In vitro Product: No mutagenic components identified

In vivo Product: No mutagenic components identified

Reproductive Toxicity Product: No components toxic to reproduction

Specific Target Organ Toxicity - Single Exposure Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure Product: No data available.

Aspiration Hazard Product: Not classified

Other Effects: None known.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish Product: No data available.

Specified substance(s):
N-AMYL ACETATE LC 50 (Western mosquitofish (*Gambusia affinis*), 24 h): 65 mg/l Mortality
LC 50 (Western mosquitofish (*Gambusia affinis*), 48 h): 65 mg/l Mortality

LC 50 (Western mosquitofish (*Gambusia affinis*), 96 h): 65 mg/l Mortality

ISOAMYL ACETATE

LC 50 (Carp (*Leuciscus idus melanotus*), 48 h): 36 mg/l Mortality

Aquatic Invertebrates

Product: No data available.

Specified substance(s):

N-AMYL ACETATE

LC 50 (Water flea (*Daphnia magna*), 24 h): 210 mg/l Mortality

LC 50 (Brine shrimp (*Artemia salina*), 24 h): 53 mg/l Mortality

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Aquatic Invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: No data available.

Specified substance(s):

N-AMYL ACETATE

LC 50 (Alga, 24 h): 1,300 mg/l

Persistence and Degradability

Biodegradation

Product: There are no data on the degradability of this product.

BOD/COD Ratio

Product: No data available.

Bioaccumulative Potential

Bioconcentration Factor (BCF)

Product: No data available on bioaccumulation.

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Specified substance(s):

N-AMYL ACETATE

Log Kow: 2.30

Mobility in Soil:

No data available.

Other Adverse Effects:

Harmful to aquatic life with long lasting effects.

13. Disposal considerations

Disposal instructions:

Discharge, treatment, or disposal may be subject to national, state, or local laws. Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging:

Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN Number: UN 1104
 UN Proper Shipping Name: Amyl acetates
 Transport Hazard Class(es)
 Class(es): 3
 Label(s): 3
 Packing Group: III
 Marine Pollutant: No

IMDG

UN Number: UN 1104
 UN Proper Shipping Name: AMYL ACETATES
 Transport Hazard Class(es)
 Class(es): 3
 Label(s): 3
 EmS No.: F-E, S-D
 Packing Group: III
 Marine Pollutant: No

IATA

UN Number: UN 1104
 Proper Shipping Name: Amyl acetates
 Transport Hazard Class(es):
 Class(es): 3
 Label(s): 3
 Marine Pollutant: No
 Packing Group: III

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

N-AMYL ACETATE Reportable quantity: 5000 lbs.
 ISOAMYL ACETATE Reportable quantity: 5000 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Acute (Immediate) Chronic (Delayed) Fire Reactive Pressure Generating

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

Chemical Identity	RQ
N-AMYL ACETATE	5000 lbs.
ISOAMYL ACETATE	5000 lbs.

SARA 311/312 Hazardous Chemical

Chemical Identity	Threshold Planning Quantity
N-AMYL ACETATE	500 lbs
ISOAMYL ACETATE	500 lbs

SARA 313 (TRI Reporting)

None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

N-AMYL ACETATE	Reportable quantity: 5000 lbs.
ISOAMYL ACETATE	Reportable quantity: 5000 lbs.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65

No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act

N-AMYL ACETATE	Listed
ISOAMYL ACETATE	Listed

US. Massachusetts RTK - Substance List

N-AMYL ACETATE	Listed
ISOAMYL ACETATE	Listed

US. Pennsylvania RTK - Hazardous Substances

N-AMYL ACETATE	Listed
ISOAMYL ACETATE	Listed

US. Rhode Island RTK

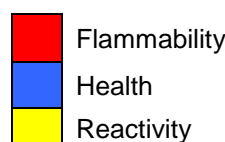
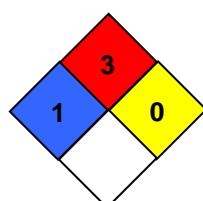
N-AMYL ACETATE	Listed
ISOAMYL ACETATE	Listed

Inventory Status:

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory
Japan (ENCS) List:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	Not in compliance with the inventory.
Japan ISHL Listing:	Not in compliance with the inventory.
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.

16. Other information, including date of preparation or last revision

NFPA Hazard ID



Special hazard.

Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

Issue Date: 11-06-2014**Revision Date:** No data available.**Version #:** 1.0**Further Information:** No data available.

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