

VINYL ACETATE MONOMER

SECTION 1: IDENTIFICATION

Product Name: VINYL ACETATE MONOMER

Product Number: 000000000000011936

Chemical Family: Ester

CAS Number: 108-05-4

Chemical Name: Vinyl acetate

Synonyms: VAM(TM), Vinyl acetate, inhibited; Acetic acid vinyl ester, Vinyl acetate monomer; Ethenyl acetate; 1-Acetoxyethylene; Ethenyl ethanoate; Acetic acid ethenyl ester

Company

Millennium Petrochemicals, Inc.
A Lyondell Company
One Houston Center, Suite 700
1221 McKinney St.

Business Contact

Customer Service 888 777-0232
Product Safety 800 700-0946

P.O. Box 2583
Houston Texas 77252-2583

24 Hour Emergency Contact

CHEMTREC 800 424-9300
LYONDELL 800-245-4532

SECTION 2: HAZARD IDENTIFICATION

Emergency Overview

This material is HAZARDOUS by OSHA Hazard Communication definition.

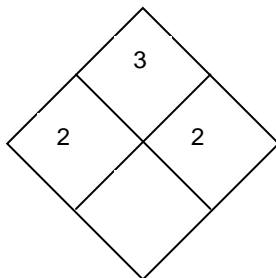
Signal Word

DANGER.

Hazards

Extremely flammable. Avoid sparks, heat, and open flame. Avoid contact with eyes, skin, and clothing. May cause irritation to skin, eyes, and respiratory tract. Avoid prolonged or repeated breathing of gases, vapors, or mists. Potential skin sensitizer. Inhalation of vapors may cause central nervous system depression. Possible cancer hazard.

NFPA®



HMIS®

Health	*	3
Flammability		3
Physical Hazard		2

Physical State

Liquid.

Color

VINYL ACETATE MONOMER

Clear, colorless.

Odor

Pungent. Sweetish smell in small quantities.

Odor Threshold

0.12 ppm / Odor is not an adequate warning of potentially hazardous ambient air concentrations.

Potential Health Effects

Routes of Exposure

Eye. Inhalation. Skin.

Signs and Symptoms of Acute Exposure

See component summary.

- *Vinyl acetate 108-05-4*

Liquid, mist, or vapors can cause eye, skin and respiratory tract irritation and CNS depression. Ingestion followed by vomiting could result in aspiration into the lungs of the more volatile components of this material which in turn could lead to life-threatening chemical pneumonia.

Skin

Skin irritant. Prolonged contact can blister and burn the skin. Potential skin sensitizer.

Inhalation

Vapor from this material is a respiratory irritant, causing coughing, discomfort, and difficulty with breathing. High vapor concentrations may cause central nervous system (CNS) depression with symptoms such as nausea, dizziness, weakness, headache, loss of coordination, loss of consciousness, coma and death.

Eye

Liquid and vapor is irritating to eyes. Will cause discomfort with mild to moderate conjunctivitis, experienced as excess redness, and possibly swelling, of the conjunctiva. Effects of eye irritation are reversible.

Ingestion

Ingestion would likely cause gastrointestinal tract irritation. Ingestion of this material, followed by vomiting and aspiration of the more volatile components of this material into the lungs, may lead to chemical pneumonia and even death.

Chronic Health Effects

See component summary.

- *Vinyl acetate 108-05-4*

Vinyl-acetate has been classified by the International Agency for Research on Cancer (IARC) as possibly carcinogenic to humans (Group 2B). Listed by NTP as reasonably anticipated to be a human carcinogen based on sufficient evidence of carcinogenicity in experimental animals.

Conditions Aggravated by Exposure

Any pre-existing disorders or diseases of the: eyes skin respiratory system

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component Name</u>	<u>CAS #</u>	<u>EU Inventory</u>	<u>Concentration Wt.%</u>	<u>Risk</u>	<u>Symbol</u>
Vinyl acetate	108-05-4	203-545-4	>= 99.9	R11	F
Hydroquinone	123-31-9	204-617-8	<= 0.003	R22, R40, R41, R43, R50, R68	Xn, N

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Compositions given are typical values not specifications.

See section 16 for full text of risk phrases.

SECTION 4: FIRST AID MEASURES

General

Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid. For specific information refer to the Emergency Overview in Section 2 of this MSDS.

Skin

Immediately flush affected area with plenty of water while removing contaminated clothing. Wash contaminated clothing before reuse. If irritation persists, get medical attention.

Inhalation

Immediately remove victim to fresh air. If victim has stopped breathing, give artificial respiration, preferably mouth-to-mouth. GET MEDICAL ATTENTION IMMEDIATELY.

Eye

Immediately flush the eyes with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower lids. If pain or irritation persists, promptly obtain medical attention.

Ingestion

If the person is conscious and able to swallow, have them drink water or milk to dilute. Never give anything by mouth if person is unconscious or having convulsions. Induce vomiting only if advised by physician or Poison Control Center. CALL A PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY!

SECTION 5: FIRE FIGHTING MEASURES

Flammable Properties

Classification

OSHA/NFPA Class IB Flammable Liquid.

Flash Point

-8 °C (17.6 °F) ASTM D-56 (Tag Closed Cup)

Auto-Ignition Temperature

427 °C (800.6 °F)

Lower Flammable Limit

2.6 vol%

Upper Flammable Limit

13.4 vol%

Extinguishing Media

Suitable: Water may be inefficient in fire fighting due to low flash point. SMALL FIRE: Use dry chemicals, CO₂, water spray or alcohol-resistant foam LARGE FIRE: Use water spray, water fog or alcohol-resistant foam

Unsuitable: Do not use solid water stream/may spread fire.

Protection of Firefighters

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Protective Equipment/Clothing: Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters protective clothing will only provide limited protection.

Fire Fighting Guidance: Extremely flammable well below ambient temperatures. Will form explosive mixtures with air. Vinyl acetate in contact with peroxides may polymerize violently. However, it is usually inhibited with hydroquinone to prevent polymerization. At elevated temperatures, such as fire conditions, polymerization may take place. Aqueous solutions of vinyl acetate (containing > 0.5 wt. %) can also be fire hazards. Vapors may travel long distances along the ground before reaching a source of ignition and flashing back. Vapors may be heavier than air. Fire may produce irritating, corrosive and/or toxic gases. When exposed to ignition source in air, vapors can burn in open or explode if confined. Liquid normally inhibited but not vapors. Move containers from fire area if you can do it without risk. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Vinyl acetate is lighter than water and does not effectively mix into water, care must be exercised not to spread burning monomer by a high velocity water stream or through displacement by accumulated fire fighting water since vinyl acetate can float on water and spread fire. Do not use straight streams. Water may be inefficient in fire fighting due to low flash point. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. Always stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

Hazardous Combustion Products: Incomplete combustion may produce carbon monoxide and other toxic gases.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Release Response

Highly flammable liquid. Release can cause fire/explosion/health/environmental hazards. Eliminate all sources of ignition. All equipment used when handling this product must be grounded. Do not touch or walk through spilled material. Stop leak if you can do it without risk. Runoff to sewer may create fire or explosion hazard. Prevent entry into waterways, sewers, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. For large spills: Contain spill with dike to prevent entry into sewers or waterways. Water spray may reduce vapor; but may not prevent ignition in closed spaces. All recovered material should be packaged, labeled, transported and disposed of or reclaimed in conformance with applicable laws and regulations and in conformance with good engineering practices. Reclaim where possible.

Avoid uncontrolled releases of this material. Where spills are possible, a comprehensive spill response plan should be developed and implemented.

SECTION 7: HANDLING AND STORAGE

Handling

Avoid any personal contact. Use only with adequate respiratory and personal protection. Do not enter storage area unless adequately ventilated. Do not handle near heat, sparks, or flame. Use only non-sparking tools. Avoid contact with eyes, skin and clothing. Avoid contact with incompatible agents. Metal containers involved in the transfer of this material should be grounded and bonded. Handle empty containers carefully - residue may be flammable and toxic. After handling, always wash hands thoroughly with soap and water.

Storage

Container headspace may contain vinyl acetate monomer vapors. Monitor inhibitor to maintain appropriate concentration. Vinyl acetate with an inhibitor level of 3-5 ppm hydroquinone should not be stored longer than six months at 21-27 deg C (70-80 deg F), or longer than one year with 14-17 ppm hydroquinone. Vinyl acetate vapors are uninhibited and may form polymers in vents or flame arrestors of storage tanks, resulting in plugging of vents. Isolate from oxidizers, caustics and alkalis, chemicals capable of spontaneous heating, ignition sources and explosives. Electrical installations should be in accordance with Articles 500 and 501 of the National Electrical Code (Class 1 Group D hazard locations). NFPA 30, Flammable and Combustible Code, should be followed for all storage and handling. Containers must be properly grounded before beginning transfer. Inspect containers carefully and frequently for leaks.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering Controls

Engineering controls, preferably enclosed systems, should be used whenever feasible to maintain exposures below

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acceptable criteria. When such controls are not feasible, or sufficient to achieve full conformance, other engineering controls such as local exhaust ventilation should be used.

Personal Protection

Inhalation A respiratory protection program that meets OSHA's 29 CFR 1910.134 or ANSI Z88.2 requirements must be followed whenever workplace conditions warrant respirator use. If exposure can exceed the standard limits, use U.S. National Institute for Occupational Safety and Health (NIOSH) approved respiratory protection equipment.

Skin Wear chemical resistant gloves such as: Teflon. Fire retardant clothing is appropriate for routine occupational use. Impervious protective suit with integral or tight-fitting gloves, boots, and full head and face protection must be worn. For applications where protective clothing is required for greater than one hour, Teflon (PTFE) as a barrier material is recommended.

Eye Use splash goggles when eye contact due to splashing or spraying liquid is possible.

Additional Remarks

Selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the hazards and/or potential hazards that may be encountered during use. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Promptly remove soiled clothing/wash thoroughly before reuse. Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using toilet facilities. Shower after work using plenty of soap and water.

Occupational Exposure Limits

Component Name	Source / Date	Value	Type	Notation
Vinyl acetate	US (ACGIH) / 2007	10 ppm	8 HRS/TWA	A3
	US (ACGIH) / 2007	15 ppm	15 MIN/STEL	A3
Hydroquinone	US (ACGIH) / 2007	2 mg/m3	8 HRS/TWA	No
	US (OSHA)	2 mg/m3	8 HRS/TWA	No

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Liquid. Clear, colorless.

Odor: Pungent. Sweetish smell in small quantities.

Odor Threshold: 0.12 ppm Odor is not an adequate warning of potentially hazardous ambient air concentrations.

pH: Not applicable.

Boiling Point/Boiling Range: 72.5 °C (162.5 °F)

Freezing Point/Melting Point: -92.3 °C (-134.14 °F) Melting point.

Flash Point: -8 °C (17.6 °F) ASTM D-56 (Tag Closed Cup)

Auto-ignition: 427 °C (800.6 °F)

Flammability: OSHA/NFPA Class IB Flammable Liquid.

Lower Flammable Limit: 2.6 vol%

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Upper Flammable Limit: 13.4 vol%

Explosive Properties: No Data Available.

Oxidizing Properties: No Data Available.

Vapor Pressure: 100 mm Hg @ 21.5 °C (70.7 °F)

Evaporation Rate: 8.9 (butyl acetate = 1)

Relative Density: 0.9338 @ 20 °C (68 °F) (Water = 1)

Relative Vapor Density: 3.0 (Air = 1.0)

Viscosity: 0.43 mPa.s @ 20 °C (68 °F)

Solubility (Water): 2.3 g/l @ 20 °C (68 °F)

Partition Coefficient (Kow): Log Kow = 0.73

Additional Physical and Chemical Properties: Additional properties may be listed in Sections 2 and 5. No additional information available.

Remarks: Volatiles, percent by volume: AP 100%

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability

Reactive (unstable) when uninhibited.

Conditions to Avoid

Depleted inhibitor levels. Heat, sparks, open flames and strong oxidizing conditions. Vapor may be ignited by static sparks, open flame, and other ignition sources. Exposure to sunlight, ultra-violet light or x-rays may result in spontaneous polymerization.

Substances to Avoid

In order to prevent potentially violent reactions, avoid contact with peroxides, hydroperoxides, hydrogen peroxide, azo compounds and other polymerization initiators, as well as strong acids, alkalis or oxidizing agents. Amines.

Decomposition Products

On decomposition, emits acrid fumes. When heated to decomposition, vinyl acetate can produce acetaldehyde and acetic acid fumes. Carbon monoxide can form on incomplete combustion.

Hazardous Polymerization

May polymerize explosively when involved in a fire.

Reactions with Air and Water

Reacts with air or water to form peroxides.

SECTION 11: TOXICOLOGICAL INFORMATION

PRODUCT INFORMATION

Product Summary

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Vinyl acetate monomer is a primary irritant to the upper respiratory tract, eyes, and skin. Prolonged or repeated contact with concentrated solutions of vinyl acetate monomer may cause reddening, blisters, or corrosion of the skin. Skin contact may also cause sensitization. Vinyl acetate monomer has caused lethality by the oral, inhalation, and dermal routes but only at high dose levels or exposure concentrations. Ingestion of large amounts of liquid or inhalation exposure to high vapor concentrations may cause central nervous system (CNS) depression. Repeated exposure of animals to high concentrations of vinyl acetate monomer by the inhalation or oral routes caused irritation and localized toxic effects but no other specific target organ toxicity. Vinyl acetate monomer is mutagenic in a variety of in vitro studies; however, in vivo studies suggest that induction of genetic effects may be limited to toxic doses. There is no evidence that vinyl acetate monomer causes cancer in humans. Long term studies in rodents have demonstrated that high concentrations of vinyl acetate monomer cause cancer at site-of-contact tissues in animals by the oral and inhalation routes. No developmental toxicity was observed in the offspring of dams exposed to levels of vinyl acetate monomer (by the oral or inhalation routes) that did not cause severe maternal toxicity. No adverse effects on reproductive performance were seen in female animals exposed to levels of vinyl acetate monomer that did not cause maternal toxicity. Decreased sperm counts and sperm abnormalities were observed in male mice but only at dose levels that caused weight loss and death. Vinyl acetate monomer is rapidly metabolized to acetaldehyde and acetic acid and these metabolites are thought to be responsible for the site-of-contact mediated effects.

COMPONENT INFORMATION

- *Vinyl acetate 108-05-4*

Acute Toxicity - Lethal Doses

<u>LC50 (Inhl)</u>	Rat	15.8 MG/L	4 HOUR
<u>LD50 (Oral)</u>	Rat	3,500 MG/KG BWT	
<u>LD50 (Skin)</u>	Rabbit.	7740 MG/KG BWT	

Acute Toxicity - Effects

Inhalation Moderate inhalation hazard. Overexposure may cause irritation to the respiratory tract and to other mucous membranes. May cause central nervous system depression with prolonged exposure.

Ingestion Vinyl acetate monomer is expected to have a low order of acute toxicity by the oral route. Ingestion of large amounts may cause CNS depression (dizziness, fatigue, weakness, headache, loss of consciousness and death) and gastrointestinal tract irritation. Ingestion, followed by vomiting and aspiration of the material into the lungs, may cause chemical pneumonia and even death.

Skin Contact Vinyl acetate monomer is expected to have a low order of acute toxicity by the dermal route. No adverse systemic effects are anticipated following accidental or incidental skin contact. However, very high exposures and prolonged contact may cause skin injury or systemic toxicity.

Irritation

Skin Skin irritant. Prolonged contact may cause severe irritation and necrosis.

Eye May cause moderate irritation, including burning sensation, tearing, redness or swelling. Effects of eye irritation are reversible. Liquid and vapor is irritating to eyes.

Sensitization

This material may cause sensitization by skin contact.

Target Organ Effects

Eye. Skin. Respiratory system. Central nervous system effects.

Repeated Dose Toxicity

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Prolonged and repeated exposure to high concentrations of vinyl acetate monomer by the inhalation route may cause adverse effects on the respiratory tract. Repeated inhalation exposure to vinyl acetate monomer at # 200 ppm for up to 2 years caused irritation and local toxic effects (including degenerative and regenerative processes, inflammation, and hyper- and metaplasia) on epithelia of the upper and lower respiratory tract in rats and mice. Reduced body weight gain was seen in rats exposed to # 600 ppm and mice exposed to # 200 ppm vinyl acetate monomer. There were no other toxicologically relevant effects by this route. No specific target organ toxicity was seen in a series of repeat dose studies in which vinyl acetate monomer was administered to rats and mice in the drinking water. The only adverse effects observed in a 13-week subchronic study were slight but non-significant growth retardation in male rats at 5000 ppm (equivalent to 684 mg/kg bw/d).

Reproductive Effects

This substance is not expected to be a reproductive toxicant. The reproductive toxicity of vinyl acetate monomer has been investigated in rats via the oral route and indirectly in mice via the intraperitoneal (ip) route. Adverse effects on sperm counts and induction of sperm abnormalities in an ip. study were observed in mice but only at toxic dose levels (# 500 mg/kg bw/d) that caused death and/or body weight loss. Vinyl acetate monomer had only a marginal effect on reproductive performance at oral exposure levels of 5000 ppm (equivalent to 500 mg/kg bw/d), a dose level that also caused maternal toxicity. In addition, no gross or histopathological effects were reported for reproductive organs in a series of repeat-dose toxicity studies in which vinyl acetate monomer was administered to rats and mice for up to two years by the oral route at 5000 ppm (equivalent to 202 mg/kg bw/d in males and 302 mg/kg bw/d in females) and inhalation route at 600 ppm (calculated as 2142 mg/m3).

Developmental Effects

This substance is not expected to be a developmental toxicant. No embryo/fetotoxic or teratogenic effects were observed in the offspring of animals receiving up to 5000 ppm (equivalent to 500 mg/kg bw/d) of vinyl acetate monomer by the oral route. Fetotoxic effects were observed in offspring of animals exposed by the inhalation route but only at 1000 ppm, a concentration that also caused severe maternal toxicity. No adverse effects were observed at 200 ppm (equivalent to 200 mg/kg bw/d). Therefore, in the absence of maternal toxicity, vinyl acetate monomer is not expected to cause embryo/fetal lethality/toxicity or teratogenicity.

Genetic Toxicity

This substance may be genotoxic. Vinyl acetate monomer caused genotoxic effects in a variety of in vitro test systems. Although positive in a sister chromatid exchange assay in rats receiving a single ip injection of 560 mg/kg bw, results from other in vivo studies suggest that induction of genetic effects may be limited to toxic doses.

Carcinogenicity

This material has been classified by IARC as a group 2B substance (possibly carcinogenic to humans). Listed by NTP as reasonably anticipated to be a human carcinogen. In animals, long-term inhalation and oral administration of vinyl acetate monomer produced tumors at the primary site of contact, the surface epithelium of the respiratory tract and of the upper gastrointestinal tract. Vinyl acetate monomer was found to cause an increase in benign or malignant squamous cell tumors and/or preneoplastic lesions of the oral cavity, tongue, esophagus and forestomach in rats and mice chronically exposed via the drinking water at 400 ppm, the lowest dose tested. No treatment-related increase in tumor incidence was observed in mice chronically exposed to vinyl acetate monomer by the inhalation route; rats chronically exposed to 600 ppm vinyl acetate monomer vapor were found to have an increased incidence of benign or malignant squamous cell nasal cavity tumors. There is no evidence that vinyl acetate monomer causes cancer in humans by any route of exposure.

- *Hydroquinone 123-31-9*

Acute Toxicity - Lethal Doses

<u>LD50 (Oral)</u>	Rat	320 MG/KG
	Guinea Pig	550 MG/KG

Acute Toxicity - Effects

Inhalation Overexposure may cause irritation to the respiratory tract and to other mucous membranes.

Ingestion May produce symptoms of CNS depression including headache, dizziness, nausea, loss of sense of balance, drowsiness, and visual disturbances.

Irritation

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Skin May be irritating to the skin. Prolonged or repeated contact may cause skin to become dry or cracked. This material may cause sensitization by skin contact.

Eye Moderate to severe eye irritant. Severe irritation may result in corneal opacity, redness, inflammation of the iris and swelling of the conjunctiva.

Sensitization

This material may cause sensitization by skin contact.

Target Organ Effects

Skin. Eye. Respiratory system. Central nervous system effects. Liver. Kidneys.

Carcinogenicity

The International Agency for Research on Cancer (IARC) has evaluated this material as an IARC Group 3 not classifiable as to carcinogenicity in humans, based on limited data in animals and inadequate data in humans.

SECTION 12: ECOLOGICAL INFORMATION

PRODUCT INFORMATION

Ecotoxicity

See component summary.

Environmental Fate and Pathway

See component summary.

COMPONENT INFORMATION

- *Vinyl acetate 108-05-4*

EcotoxicityAcute toxicity to fish

LC50 / 96 HOUR fathead minnow 14 mg/l

Summary: Moderately toxic to fish.

LC50 / 96 HOURS bluegill. 18 mg/l

Acute toxicity to aquatic invertebrates

EC50 / 48 HOURS waterflea. 12.6 mg/l

Summary: Moderately toxic to freshwater and marine invertebrates.

Toxicity to aquatic plants

EC50 / 72 HOURS green algae. 12.7 mg/l

Summary: Causes moderate inhibition of algal growth.

NOEC / 72 HOURS green algae. 5.96 mg/l

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Toxicity to microorganisms

EC3 / 16 HOURS bacteria. 6 mg/l
Summary: Low toxicity to bacteria.

EC5 / 48 HOURS Protozoa 9.5 mg/l

EC50 / 84 HOURS Anaerobic bacteria 1,150 mg/l

Chronic toxicity to fish

NOEC / 34 d fathead minnow 0.55 mg/l
Summary: Moderate chronic toxicity to fish.

Chronic toxicity to aquatic invertebrates

Summary: No Data Available.

Other Adverse Effects

Data not strictly relevant for assessing terrestrial effects, based on rapid removal of vinyl acetate from the environment, no long term adverse effects expected.

Environmental Fate and Pathway

Volatilization from water surfaces is expected to be an important environmental fate process. The vapor-phase of this material is degraded in the atmosphere by reaction with photochemically-produced hydroxyl radicals and ozone.

Mobility

Transport between environmental compartments: Based on water solubility, partition coefficient and vapor pressure, this substance is expected to have high mobility and be partitioned mainly into the atmospheric and water compartments

Persistence and Degradability

Stability in Water: Volatilization from water surfaces is expected to be an important environmental fate process. Not likely to adsorb to suspended solids and sediment in water.

Biodegradation: Readily biodegradable

Bioaccumulation: ~ 2.09 - 2.34 (estimated). Low potential for bioaccumulation.

- *Hydroquinone* 123-31-9

Ecotoxicity

No Data Available.

Environmental Fate and Pathway

This material is not expected to persist in the environment. Volatilization from moist soil surfaces is not expected to be an important environmental fate process. Expected to have high mobility in soils. If released to the atmosphere, this material should exist in both the vapor and particulate phases. Vapor-phase is degraded in the atmosphere by reaction with photochemically produced hydroxyl radicals. Particulate-phase of this material may be physically removed from the air by wet and dry deposition. Photochemical degradation in air is expected to be rapid.

Persistence and Degradability

Stability in Water: Not likely to adsorb to suspended solids and sediment in water. Volatilization from water surfaces is not expected to be an important environmental fate process.

Stability in Soil: Volatilization from moist soil surfaces is not expected to be an important environmental fate process. Expected to have very high to moderate mobility in soils.

Biodegradation: Biodegradable under aerobic conditions.

Bioaccumulation: This material is not expected to bioaccumulate.

SECTION 13: DISPOSAL CONSIDERATIONS

VINYL ACETATE MONOMER

Information provided in this material safety data sheet applies to the product as manufactured. Processing, use and contamination may render this information inappropriate for the material requiring disposal. State and local laws, and regulations may differ from federal requirements, and requirements may change or be re-interpreted. It is the responsibility for the waste generator to characterize waste streams relative to the pertinent regulatory provisions to ensure that applicable requirements are reviewed and met. Contaminated product, soil, water, container residues and spill cleanup materials may be hazardous wastes under applicable local, state or international regulations due to potentially low flash point. Incinerate concentrated liquids in compliance with local, state or international regulations.

SECTION 14: TRANSPORT INFORMATION

Special Requirements

If you reformulate or further process this material, you should consider re-evaluation of the regulatory status of the components listed in the composition section of this sheet, based on final composition of your product.

Proper Shipping Name VINYL ACETATE, STABILIZED

RQ Vinyl acetate

ID No. UN1301

Hazard Class 3

PG II

SECTION 15: REGULATORY INFORMATION

Regulatory Status

Country	Inventory	
Australia	AICS	X
Canada	DSL	X
Canada	NDSL	
China	IECS	X
European Union	EINECS	X
European Union	ELINCS	
European Union	NLP	
Japan	ENCS	X
Korea	ECL	X
Philippines	PICCS	X
United States	TSCA	X

X = All components are included or are otherwise exempt from inclusion on this inventory.

C = Contact Lyondell/Equistar by e-mail at product.safety@lyondell.com or product.safety@equistarchem.com for additional information.

If identified components of this product are listed under the TSCA 12(b) Export Notification rule, they will be listed below.

SARA 302/304

This material contains a component(s) with known CAS numbers classified as hazardous substances subject to the reporting of CERCLA (40 CFR 302) and/or to the release reporting requirements of SARA (Section 302) based on reportable quantities (RQs).

<u>Component</u>	<u>TPQ</u>	<u>RQ</u>
Vinyl acetate / CAS# 108-05-4		5,000 lbs 1,000 lbs
Hydroquinone / CAS# 123-31-9	10,000 lbs	100 lbs

SARA 311/312

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Based upon available information, this material is classified as the following health and/or physical hazards according to Section 311 & 312:

Immediate (Acute) Health Hazard.
Delayed (Chronic) Health Hazard.
Fire Hazard.
Reactive.

SARA 313

This material contains the following chemicals with known CAS numbers subject to the reporting requirements of SARA Title III, Section 313 and 40 CFR 372:

<u>Component</u>	<u>Reporting Threshold</u>
Vinyl acetate / CAS# 108-05-4	0.1%
Hydroquinone / CAS# 123-31-9	1.0%

State Reporting

This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins under California Proposition 65 at levels which would be subject to the proposition.

Massachusetts Substances List (MSL) - Extraordinarily hazardous substances on the MSL-EHL must be identified when present in materials at levels greater than state specified criterion. The criterion is $\geq 0.0001\%$. Components with CAS numbers present in this material at levels which could require reporting under the statute are:

- Vinyl acetate / CAS# 108-05-4
- Hydroquinone / CAS# 123-31-9

Environmentally Hazardous Substances listed by the State of Pennsylvania must be identified when present in materials at levels greater than the state specified criterion. The criterion is $\geq 1\%$. Components with CAS numbers in this material at a level which could require reporting under the statute are:

- Vinyl acetate / CAS# 108-05-4
- Hydroquinone / CAS# 123-31-9

US. New Jersey Community Right-to-Know Survey, Table A: NJ Environmental Hazardous Substances [EHS] List (N.J. Admin. Code Title 7 Section 1G-2.1):

- Vinyl acetate / CAS# 108-05-4
- Hydroquinone / CAS# 123-31-9

SECTION 16: OTHER INFORMATION

Latest Revision(s)

Revised Section(s): 3 8 11 12 Date of Revision: April 7 2007

All Relevant Risk Phrases

R11 - Highly flammable.
R22 - Harmful if swallowed.
R40 - Limited evidence of a carcinogenic effect.
R41 - Risk of serious damage to eyes.

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R43 - May cause sensitization by skin contact.

R50 - Very toxic to aquatic organisms.

R68 - Possible risk of irreversible effects.

DISCLAIMER OF RESPONSIBILITY

This document is generated for the purpose of distributing health, safety, and environmental data. It is not a specification sheet nor should any displayed data be construed as a specification. The information on this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this MSDS information may not be applicable.

Numerical Data Presentation

The presentation of numerical data, such as that used for physical and chemical properties and toxicological values, is expressed using a comma (,) to separate digits into groups of three and a period (.) as the decimal marker. For example, 1,234.56 mg/kg = 1 234,56 mg/kg

Language Translations

This document may be available in languages other than English.

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