Product name	Vinyl acetate		AGHS/EN
MSDS number	80094	**Revision Date**	Jul.11.2017
Revision Number	10.02	**Issuing date**	Jul.11.2017***

1. Identification of the substance/preparation and the company/undertaking

Product name

Vinyl acetate

Manufacturer or supplier's details

Celanese (Shanghai) International Trading Co., Ltd.
Room 239, Xinmao Building
South Taizhong Road
Waigaoqiao Free Trade Zone
Shanghai, China

Celanese Pte Ltd
10 Hoe Chiang Road, #07-05 / 06
Keppel Towers
Singapore 089315

Product Information
HazCom@celanese.com

Emergency telephone number
+(65) 62656917 (Operations Room direct dial)
or fax request to +(65) 62664696 (Facsimile to Operations Room)
or email to posh.er@paccoffshore.com.sg

In China Emergency Number: 86-532-83889090 (NRCC)

Identified uses
Monomer

2. Hazards identification

GHS Classification

Hazards	**Category**
Flammable liquid	Category 2
Acute oral toxicity	Category 5
Acute inhalation toxicity	Category 4
Specific target organ systemic toxicity (single exposure)	Category 3
Carcinogenicity	Category 2
Acute aquatic toxicity	Category 3

Labeling

Symbol(s)



Signal Word Danger

Hazard Statements
H225 - Highly flammable liquid and vapor
H303 - May be harmful if swallowed
H332 - Harmful if inhaled
H335 - May cause respiratory irritation
H351 - Suspected of causing cancer
H402 - Harmful to aquatic life

Precautionary Statements
P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray
P281 - Use personal protective equipment as required
P308 + P313 - IF exposed or concerned: Get medical attention/advice
P273 - Avoid release to the environment

3. Composition/Information on ingredients

Components	CAS-No	Percent %
Vinyl acetate	108-05-4	min 99.9

4. First aid measures

General Information
Remove contaminated, soaked clothing immediately and dispose of safely. Pay attention to own protection. In any case show the physician the Safety Data Sheet.

Skin
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a physician.

Eyes
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician immediately.

Inhalation
Keep at rest. Move to fresh air. Call a physician immediately.

Ingestion
Rinse with plenty of water. If conscious, drink plenty of water. If swallowed, do not induce vomiting - seek medical advice.

5. Fire-fighting measures

NFPA: **Health:** 2 **Flammability:** 3 **Instability:** 2

Suitable extinguishing media
Foam, Dry chemical, Carbon dioxide (CO2)

Extinguishing media which must not be used for safety reasons
Do not use a solid water stream as it may scatter and spread fire.

Special exposure hazards arising from the substance or preparation itself, its combustion products, or released gases
Under conditions giving incomplete combustion, hazardous gases produced may consist of
Carbon monoxide
Carbon dioxide (CO2)
Combustion gases of organic materials must in principle be graded as inhalation poisons
Vapors are heavier than air and may spread along floors
Vapors may cause flash fire or explosion

Special protective equipment for fire-fighters
self-contained breathing apparatus (EN 133).

Environmental precautions
Water used to fight fire runoff can cause environmental damage. Dike and collect water used to fight fire

Other Information
Cool containers / tanks with water spray.

6. Accidental release measures

Personal precautions
Avoid contact with the skin and the eyes. Keep away from heat and sources of ignition. Provide adequate ventilation.

Environmental precautions
Prevent further leakage or spillage. Do not discharge into the drains/surface waters/groundwater. Material creates a special hazard because it floats on water.. Caution: Spontaneous polymerization can occur if material is released or mixed with incompatibles..

Methods for cleaning up
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal. Dispose of in accordance with local regulations.

7. Handling and storage

Advice on safe handling
Provide sufficient air exchange and/or exhaust in work rooms.

Incompatible products
oxidizing agents, radical initiators, strong acids, amines

Protection - fire and explosion:
Keep away from sources of ignition - No smoking. Take necessary action to avoid static electricity discharge. Ground and bond containers when transferring material. In case of fire, emergency cooling with water spray should be available.
Blanketing vinyl acetate under an inert atmosphere eliminates flammable vapor in the head space and contamination with atmospheric moisture.. Bulk storage of vinyl acetate at ambient temperatures is an acceptable practice when there is a routine turnover of the tank contents every 60 days or less. Inhibitor levels should be monitored if a stability problem is suspected..

Material storage
Store locked up.. Keep in a dry, cool and well-ventilated place.

Incompatible products
oxidizing agents, radical initiators, strong acids, amines

Technical measures/Storage conditions
Keep tightly closed in a dry, cool and well-ventilated place. Handle an open container with care. Store at temperatures not exceeding 30 °C/ 86 °F.

8. Exposure controls / personal protection

ACGIH Exposure Limits

Components	TWA
Vinyl acetate	10 PPM

Components	STEL
Vinyl acetate	15 PPM

OSHA Exposure Limits

Components	STEL
Vinyl acetate	20 PPM

Exposure controls

Engineering measures
General or dilution ventilation is frequently insufficient as the sole means of controlling employee exposure. Local ventilation is usually preferred. Explosion-proof equipment (for example fans, switches, and grounded ducts) should be used in mechanical ventilation systems.

Personal protective equipment

General advice
Avoid contact with skin and eyes. Do not breathe vapors or spray mist. Use only in an area equipped with a safety shower. Hold eye wash fountain available.

Hygiene measures
When using, do not eat, drink or smoke.. Take off all contaminated clothing immediately. Wash hands before breaks and immediately after handling the product..

Respiratory protection	respirator with A filter.
Eye protection	Tightly fitting safety goggles. In addition to goggles, wear a face shield if there is a reasonable chance for splash to the face. Equipment should conform to EN 166.
Skin protection	impervious clothing
Hand protection	Chemicals resistant gloves
Suitable material	Butyl-rubber
Type	Butoject (Company KCL) or comparable article; or refer to glove manufacturer's recommendation
Evaluation	according to EN 374: level 5
Material thickness	approx. 0.7 mm
Break through time	approx. 240 min

9. Physical and chemical properties

Appearance

Form	liquid
Color	colourless
Odor	sweet, fruity
Odor Threshold	0.12 ppm (gas in air)
Molecular Weight	86.09 g/mol
Flash point	-8°C
Method	closed cup
Ignition temperature	402°C
Decomposition Temperature	Not determined
Lower explosion limit	2.6 Vol. %
Upper explosion limit	13.4 Vol. %
Flammability (solids)	not applicable
Melting point/range	-93.2°C
Boiling point/range	72.7°C @ 1013 hPa
Density	0.932 g/ml @ 20°C
pH	neutral
Viscosity	0.42 - 0.43 mPa*s @ 20°C
Vapor pressure	113 hPa @ 20°C 445 hPa @ 50°C
Vapor density	3.0 (Air=1)
Evaporation Rate	8.9 (n-Butyl acetate = 1)
Water solubility	20 g/l @ 20°C
Solubility in other solvents	miscible with, Ethanol, soluble in, Diethyl ether, Acetone, Benzene, Chloroform
Partition coefficient (n-octanol/water)	0.73 (measured)
Explosive Properties	not applicable based on consideration of the structure
Oxidizing Properties	not applicable based on consideration of the structure
Surface Tension	23.95 mN/m @ 20°C
Dissociation constant	not applicable based on consideration of the structure

10. Stability and reactivity

Chemical stability
Stable under normal conditions of handling, use and transportation.

Conditions to avoid
Avoid any source of ignition.. Avoid contact with heat, sparks, open flame, and static discharge.. Avoid temperatures above 30 °C / 86 °F..

Incompatible Materials
Keep away from:, oxidizing agents, radical initiators, strong acids, amines

Hazardous Combustion or Decomposition Products:
Thermal decomposition products may include oxides of carbon.

11. Toxicological information

Potential health effects

Routes of exposure Skin, eyes, inhalation.

Immediate effects

Skin May cause slight skin irritation.

Eyes Essentially non-irritating.

Inhalation May cause irritation of respiratory tract. Symptoms of exposure may include: Nasal discharge, hoarseness, coughing, chest pain and breathing difficulty. Accumulation of fluid in the lungs (pulmonary edema); symptoms can be delayed for several hours.

Ingestion May cause gastrointestinal irritation.

Other: Vinyl Acetate is listed as an IARC 2B, possible human carcinogen based on animal data.

Target organ effects Overexposure (prolonged or repeated exposure) may cause:
Local irritation at the site of exposure

Medical conditions which may be aggravated by exposure: Respiratory Tract
Skin
Eyes

Vinyl acetate

Acute oral toxicity	LD50: 3500 mg/kg
Acute dermal toxicity	LD50: 7440 mg/kg
Acute inhalation toxicity	LC50 (4h): 15810 mg/m³
Method	Standard Acute Method

Skin corrosion/irritation	Not irritating
Species	rabbit
Method	OECD 404
Skin Sensitization	nonsensitizer
Species	mouse female
Method	OECD 429
Serious eye damage/eye irritation	Not irritating
Species	rabbit eye
Method	OECD 405
Carcinogenic effects	Has been shown to cause cancer in lifetime rat and mouse inhalation studies at the site of contact at non-physiologically relevant doses
Species	rats and mice
Study	104-week inhalation study
	NOAEC: 176 mg/m³
Carcinogenic Effects	Has been shown to cause cancer in lifetime rat and mouse drinking water studies at the site of contact at non-physiologically relevant doses
Species	rats and mice
Study	104-week oral gavage study
	LOAEL: 31 mg/kg bw/day
in vitro Mutagenicity	Ames Test: negative - with and without metabolic activation - Method: OECD 471 Chromosome aberrations in cultured human lymphocytes: positive - with and without metabolic activation - Method: OECD 473 Cytotoxicity and micronucleos assay in human lymphoblastoid cells (TK6): positive - Method: OECD 487
in vivo Mutagenicity	Mammalian Erythrocyte Micronucleus Test in mice: ambiguous - Method: OECD 474 Effects on sperm morphology and meiotic micronuclei in mice: negative
Reproductive toxicity	No toxicity to reproduction
Routes of exposure	oral drinking water
Species	rat
	NOAEL= 1000 ppm
Developmental effects	no adverse developmental effects
Routes of exposure	oral drinking water and Inhalation
Species	rat
Repeated exposure	No adverse effects
Routes of exposure	oral gavage
Species	rats and mice
Method	OECD 408
	NOAEL: 281 mg/kg bw/day
Repeated Exposure	No adverse effects
Routes of exposure	Inhalation
Species	rats and mice
Method	OECD 453
	NOAEC: 176 mg/m³

12. Ecological Information

Vinyl acetate

Chronic fish toxicity	NOEC (34d): 0.16 mg/l
Species:	Pimephales promelas (Fathead minnow)
Method	OECD 210
Acute daphnia toxicity	EC50: 12.6 mg/l (48h)
Species:	Daphnia magna
Method	OECD 202
Toxicity to aquatic plants	EC50: 12.7 mg/l (72h)
Species:	Pseudokirchneriella subcapitata
Method	OECD 201
Toxicity to bacteria	EC3 (16h): 6 mg/l
Species:	Pseudomonas putida
Biodegradation	Readily biodegradable
Species:	activated sludge
Method	OECD 301 C
Bioaccumulation	Does not bioaccumulate
Mobility in soil	Only a low potential to adsorb to soils or sediments
Other potential hazards	The substance does not meet the criteria for PBT / vPvB according to REACH, Annex XIII

13. Disposal considerations

Product information
Disposal required in compliance with all waste management related state and local regulations. The choice of the appropriate method of disposal depends on the product composition by the time of disposal as well as the local statutes and possibilities for disposal

Uncleaned empty packaging
Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse

14. Transport information

US Department of Transportation

UN/NA Number:	UN 1301
Proper Shipping Name	Vinyl Acetate, stabilized
Hazard class	3
Packing Group	II
Reportable Quantity (RQ)	5000 lb/2270kg
Emergency Resp. Guide	129P

ADR/RID

UN/ID No.	UN 1301
Proper Shipping Name	Vinyl Acetate, stabilized
Hazard Class	3
Classification Code	F1
Packing group	II

14. Transport information

Environmentally hazardous	no
Tunnel Restriction Code	(D/E)
Hazard Label(s)	3
Hazard Number	339

ADN ADN: Container and Tanker

UN/ID No.	UN 1301
Proper Shipping Name	Vinyl Acetate, stabilized
Hazard Class	3
Classification Code	F1
Packing group	II
Environmentally hazardous	no
Hazard Labels	3

ICAO/IATA

UN-No.	UN 1301
Proper Shipping Name	Vinyl Acetate, stabilized
Hazard Class	3
Packing group	II
Environmentally hazardous	no
Hazard Labels	3

IMDG

UN/ID No.	UN 1301
Proper Shipping Name	Vinyl Acetate, stabilized
Hazard Class	3
Packing group	II
Marine pollutant	no
Hazard Labels	3
EmS Code	F-E, S-D

15. Regulatory information

INTERNATIONAL REGULATIONS

This substance is classified as dangerous according to Chinese legislation

International Inventories
Listed on the chemical inventories of the following countries or qualifies for an exemption:
Australia (AICS)
Canada (DSL)
China (IECSC)
Europe (EINECS)
Japan (ENCS)
Japan (ISHL)
Korea (KECI)
New Zealand (NZIoC)
Philippines (PICCS)
United States (TSCA)

16. Other information

HMIS: Health: 2* Flammability: 3 Physical Hazard: 2

Prepared By
Product Stewardship Department
Celanese

Other Information:
Observe national and local legal requirements.

Changes against the previous version are marked by ***

Sources of key data used to compile the datasheet
Information contained in this safety data sheet is based on Celanese owned data and public sources deemed valid or acceptable. The absence of data elements required by ANSI or 1907/2006/EC indicates that no data meeting these requirements is available.

Further information
This information is based on our present state of knowledge. It shall describe our products regarding safety requirements and shall not be construed as a guarantee or statement of condition and/or quality For more information, other material safety data sheets or technical data sheets please consult the Celanese homepage (www.celanese.com)