

Product name Vinyl acetate
MSDS number 80094
Revision Number 4.01

EUIS/EN
Revision Date Jul.02.2009
Issuing date Jul.02.2009

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

Product name
Vinyl acetate

Manufacturer, importer, supplier
Celanese Chemicals Europe GmbH
Frankfurter Straße 111
D-61476 Kronberg/Ts.

Product Information
PS.Chemicals.EU@celanese.com

Emergency telephone number
+49 (0)69-305 6418

End use:
Chemical intermediate (including monomers)

2. Hazards identification

Indication of danger Highly flammable

R-phrases(s)
R11 - Highly flammable.

3. Composition/information on ingredients

| Components | CAS-No | EC-No. | Classification | Percent % |
|---------------|----------|-----------|----------------|-----------|
| Vinyl acetate | 108-05-4 | 203-545-4 | F;R11 | 99.9 min. |

Remarks Hydroquinone is present at 3 - 30 ppm as a polymerization inhibitor. Monomethyl ether of hydroquinone may be present upon request.

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.

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

Skin Wash off immediately with soap and plenty of water 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.

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

Notes to physician

- Main symptoms** Vapours may cause irritation to the eyes, respiratory system and the skin, Gastrointestinal discomfort.
- Special hazard** respiratory disorder.
- Treatment** Treat symptomatically. In case of lung irritation first treatment with dexametason aerosol (spray). In case of choking: administration of activated charcoal and a saline laxative agent.. In the case of absorption of large volumes, use gastroscopy with suction cleaning.

5. Fire-fighting measures

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

Special protective equipment for fire-fighters

self-contained breathing apparatus (EN 133).

Environmental precautions

Water 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.

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7. Handling and storage

Handling

Advice on safe handling

Provide sufficient air exchange and/or exhaust in work rooms.

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..

Temperature class

T2

Storage

Technical measures/Storage conditions

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

Incompatible products

oxidizing agents, radical initiators, strong acids, amines

German storage class

3A: Flammable liquids.

8. Exposure controls / personal protection

National occupational exposure limits

| Components | TWA | |
|---------------|----------------------|--------|
| Vinyl acetate | 10 mg/m ³ | 30 ppm |

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.

Safety data sheet according to regulation (EG) Nr. 1907/2006



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|-------------------------------|--|
| 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/PA 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 |
| Type | Butoject (Company KCL) or comparable article; or refer to glove manufacturer's recommendation |
| Evaluation | according to EN 374: level 4 |
| Material thickness | approx 0.3 mm |
| Break through time | approx 120 min |
| Suitable material | butyl-rubber |

9. Physical and chemical properties

| | |
|--|----------------------------------|
| Appearance | |
| Form | liquid |
| Colour | colourless |
| Odor | sweet |
| Flash point | -8°C |
| Method | closed cup |
| Ignition temperature | 385°C |
| Method | DIN 51794 |
| Lower explosion limit | 2.6 Vol. % |
| Upper explosion limit | 13.4 Vol. % |
| Melting point/range | -93.2°C |
| Boiling point/range | 72°C @ 1013 hPa |
| Density | 0.93 g/ml @ 20°C |
| pH | Neutral |
| Viscosity | 0.43 mPa*s @ 20°C |
| vapor pressure | 120 hPa @ 20°C 445 hPa @ 50°C |
| vapor density | 3.0 (Air=1) |
| Water solubility | 20 g/l @ 20°C |
| Partition coefficient (n-octanol/water) | 0.73 (measured) Hansch/Leo |

10. Stability and reactivity

| | |
|------------------|---|
| Stability | Stable under normal conditions of handling, use and transportation. |
|------------------|---|

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| 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. |
| Materials to avoid | Keep away from:, oxidizing agents, radical initiators , strong acids, amines |
| Thermal decomposition | No decomposition if used as directed. If heated to thermal decomposition the following decomposition products may occur depending on the conditions. carbon oxides. |
| Hazardous reactions | Polymerization can occur. May polymerize violently or explosively if contaminated or overheated. . Uncontrolled polymerization can cause rapid evolution of heat and increased pressure which can result in violent rupture of storage vessels or containers.. |

11. Toxicological information

Vinyl acetate

| | |
|------------------------------|---|
| Oral | LD50: 2920 mg/kg, rat |
| Dermal | LD50: 2335 mg/kg, rabbit |
| Inhalation | LC50: 4000 ppm, rat, 4h |
| Skin irritation | Mild skin irritation |
| Species | rabbit |
| Method | OECD 404 |
| Skin Sensitization | nonsensitizer |
| Species | mouse |
| Method | OECD 429 |
| Eye Irritation | Mild eye irritation |
| Species | rabbit eye |
| Method | OECD 405 |
| Carcinogenic effects | Has been shown to cause cancer in lifetime rat inhalation and rat and mouse drinking water studies at the site of contact at non-physiologically relevant doses |
| Carcinogenic Effects | No evidence of carcinogenicity |
| Species | mice |
| Study | inhalation lifetime study |
| in vitro Mutagenicity | Positive and negative results |
| in vivo Mutagenicity | Both positive and negative results |
| | Not a mutagenic concern in human at physiologically relevant routes of entry |
| Reproductive toxicity | No toxicity to reproduction |
| Routes of exposure | oral drinking water |
| Species | rat |
| Developmental effects | no adverse developmental effects |
| Routes of exposure | oral drinking water and Inhalation |
| Species | rat |

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11. Toxicological information

Repeated exposure

28-day and 90-day effect respiratory tract irritation
extensive degeneration of upper respiratory tract
epithelium Degeneration of the olfactory mucosa was
observed

Routes of exposure
Species

Inhalation
rats

12. Ecological information

Vinyl acetate

Toxicity to fish

Species

LC50: 19 mg/l (96h)

Pimephales promelas (Fathead minnow)

Species

LC50: 18 mg/l (96h)

Lepomis macrochirus (Bluegill sunfish)

Toxicity to daphnia

Species

EC50: 12.6 mg/l (48h)

Daphnia magna

Toxicity to algae

Species

EC50: 8.8 mg/l (72h)

Selenastrum capricornutum (green algae)

Toxicity to bacteria

EC50: 6.0 mg/l

Biodegradation

51 - 62 % % (5d)

Bioconcentration factor (BCF)

2

Bioaccumulation

Bioaccumulative potential - low

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

ADR/RID

UN/ID No.

UN 1301

Proper Shipping Name

Vinyl Acetate, stabilized

Hazard Class

3

Packing group

II

Tunnel Restriction Code

(D/E)

Hazard Number

339

ADNR

ADNR: Container and Tanker

UN/ID No.

UN 1301

Proper Shipping Name

Vinyl Acetate, stabilized

Hazard Class

3

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14. Transport information

Packing group II

ICAO/IATA

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

IMDG

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

15. Regulatory information

Labelling in accordance with EC directives

EC label

Symbol(s) F - Highly flammable.

R-phrase(s) R11 - Highly flammable.

S-phrase(s) S16 - Keep away from sources of ignition - No smoking.
S23.2 - Do not breathe vapour.
S29 - Do not empty into drains.
S33 - Take precautionary measures against static discharges.

Water Hazard Class (WGK):

WGK Class 2
WGK Reg-Nr. 203
WGK Source Classification according to VwVwS, Annex 1 or 2

16. Other information

R-phrase(s)

R11 - Highly flammable.

For further information, see:

For more information, other material safety data sheets or technical data sheets please consult the Celanese homepage (www.celanese.com).

**Safety data sheet
according to regulation (EG) Nr. 1907/2006**



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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 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.