Section 1 - Product and Company Information

Product Name                       VINYL ACETATE, 99+%  
Product Number                     V1503  
Brand                              ALDRICH  
Company                            Sigma-Aldrich  
Street Address                     3050 Spruce Street  
City, State, Zip, Country          SAINT LOUIS MO 63103 US  
Technical Phone:                   314 771 5765  
Emergency Phone:                   414 273 3850 Ext. 5996  
Fax:                               800 325 5052

Section 2 - Composition/Information on Ingredient

Substance Name                          CAS #                  SARA 313  
VINYL ACETATE                           108-05-4               Yes  

Formula         C4H6O2  
Synonyms        Acetate de vinyle (French) * Acetic acid, ethenyl ester * Acetic acid, ethylene ether * Acetoxyethene * 1-Acetoxyethylene * Ethanoic acid, ethenyl ester * Ethenyl acetate * Ethenyl ethanoate * Octan winylu (Polish) * VAC * Vinile (acetato di) (Italian) * Vinylacetaat (Dutch) * Vinilacetat (German) * Vinyl acetate (ACGIH) * Vinyl acetate H.Q. * Vinyl A monomer * Vinyle (acetate de) (French) * Vinylester kyseliny octove (Czech) * Vinyl ethanoate * VYAC * Zeset T  
RTECS Number:   AK0875000

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

HMIS RATING
HEALTH: 2*  
FLAMMABILITY: 3  
REACTIVITY: 0

NFPA RATING
HEALTH: 2  
FLAMMABILITY: 3  
REACTIVITY: 0

*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.
Section 4 - First Aid Measures

ORAL EXPOSURE
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION EXPOSURE
If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

DERMAL EXPOSURE
In case of contact, immediately wash skin with soap and copious amounts of water.

EYE EXPOSURE
In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

Section 5 - Fire Fighting Measures

FLAMMABLE HAZARDS
Flammable Hazards: Yes

EXPLOSION HAZARDS
Vapor may travel considerable distance to source of ignition and flash back. Container explosion may occur under fire conditions.

FLASH POINT
17.6 °F  -8 °C  Method: closed cup

EXPLOSION LIMITS
Lower: 2.6 %  Upper: 13.4 %

AUTOIGNITION TEMP
427 °C

FLAMMABILITY
N/A

EXTINGUISHING MEDIA
Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

FIREFIGHTING
Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s): Flammable liquid. Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL
Evacuate area. Shut off all sources of ignition. Use nonsparking tools.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)
Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP
Cover with dry-lime, sand, or soda ash. Place in covered
containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING
User Exposure: Do not breathe vapor. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE
Suitable: Keep tightly closed. Keep away from heat, sparks, and open flame.
Store at 2-8°C

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS
Safety shower and eye bath. Use nonsparking tools. Mechanical exhaust required.

PERSONAL PROTECTIVE EQUIPMENT
Respiratory: Government approved respirator.
Hand: Compatible chemical-resistant gloves.
Eye: Chemical safety goggles.

GENERAL HYGIENE MEASURES
Remove and wash contaminated clothing promptly. Wash thoroughly after handling.

EXPOSURE LIMITS, RTECS
Country  Source  Type      Value
USA      ACGIH    STEL     15 PPM
USA      ACGIH    TWA      10 PPM
USA      MSHA Standard-air TWA  10 PPM (30 MG/M3)
New Zealand OEL
Remarks: check ACGIH TLV
USA      NIOSH    Ceiling co4 PPM/15M

EXPOSURE LIMITS
Country  Source  Type      Value
Poland   NDS      10 mg/m3
Poland   NDSCh   30 mg/m3
Poland   NDSP

Section 9 - Physical/Chemical Properties

Appearance  Physical State: Clear liquid
Color: Colorless

Property                        Value                        At Temperature or Pressure
Molecular Weight                86.09 AMU
pH                               N/A
BP/BP Range                    71 - 73 °C
MP/MP Range                    -93 °C
Freezing Point                 N/A
Vapor Pressure                  N/A
Vapor Density                   3 g/l
Saturated Vapor Conc.          N/A
SG/Density                      0.932 g/cm3
Bulk Density                    N/A
Odor Threshold          N/A
Volatile%               N/A
VOC Content             N/A
Water Content           N/A
Solvent Content         N/A
Evaporation Rate        N/A
Viscosity               N/A
Surface Tension         N/A
Partition Coefficient   N/A
Decomposition Temp.     N/A
Flash Point             17.6 °F -8 °C       Method: closed cup
Explosion Limits        Lower: 2.6 %
                        Upper: 13.4 %
Flammability            N/A
Autoignition Temp       427 °C
Refractive Index        1.395
Optical Rotation        N/A
Miscellaneous Data      N/A
Solubility              N/A

N/A = not available

Section 10 - Stability and Reactivity

STABILITY
Stable: Stable.
Conditions to Avoid: Heat. Loss of inhibitor
Materials to Avoid: Acids, Bases, Oxidizing agents, Peroxides.

HAZARDOUS DECOMPOSITION PRODUCTS
Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

STABILIZERS PRESENT
Stabilized with hydroquinone.

HAZARDOUS POLYMERIZATION
Hazardous Polymerization: May occur
Hazardous Polymerization Reactions: May polymerize on exposure to light.

Section 11 - Toxicological Information

ROUTE OF EXPOSURE
Skin Contact: Causes skin irritation.
Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: Causes eye irritation.
Inhalation: Harmful if inhaled. Material is irritating to mucous membranes and upper respiratory tract.
Ingestion: May be harmful if swallowed.

TARGET ORGAN(S) OR SYSTEM(S)
Central nervous system. Liver. Cardiovascular system.

TOXICITY DATA
Oral
Rat
2900 mg/kg
LD50

Inhalation
Rat
11,400 mg/m³
LC50
Oral
Mouse
1600 mg/kg
LD50
Inhalation
Mouse
1,550 ppm
LC50
Inhalation
Rabbit
2,500 ppm
LC50
Skin
Rabbit
2335 mg/kg
LD50
Inhalation
Guinea pig
6,200 ppm
LC50

IRRITATION DATA

Eyes
Human
22 ppm

CHRONIC EXPOSURE - CARCINOGEN
Result: This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

Species: Rat
Route of Application: Oral
Dose: 100 GM/KG
Exposure Time: 2Y
Frequency: C
Result: Tumorigenic:Carcinogenic by RTECS criteria.
Endocrine: Thyroid tumors. Tumorigenic Effects: Uterine tumors

Species: Rat
Route of Application: Inhalation
Dose: 600 PPM
Exposure Time: 6H/5D/2Y
Frequency: I

Species: Mouse
Route of Application: Inhalation
Dose: 600 PPM
Exposure Time: 6H/5D/2Y
Frequency: I
Result: Tumorigenic:Equivocal tumorigenic agent by RTECS
criteria. Lungs, Thorax, or Respiration: Tumors.

IARC CARCINOGEN LIST

Rating: Group 2B

CHRONIC EXPOSURE - MUTAGEN

Species: Human
Dose: 500 UMOL/L
Cell Type: lymphocyte
Mutation test: Micronucleus test

Species: Human
Dose: 250 UMOL/L
Cell Type: lymphocyte
Mutation test: Cytogenetic analysis

Species: Human
Dose: 100 UMOL/L
Cell Type: lymphocyte
Mutation test: Sister chromatid exchange

Species: Mouse
Route: Intraperitoneal
Dose: 1 GM/KG
Mutation test: Micronucleus test

Species: Mouse
Route: Intraperitoneal
Dose: 2500 MG/KG
Exposure Time: 5D
Mutation test: sperm

Species: Hamster
Dose: 62500 UG/L
Cell Type: Embryo
Mutation test: Morphological transformation.

Species: Hamster
Dose: 125 UMOL/L
Cell Type: ovary
Mutation test: Sister chromatid exchange

CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Rat
Dose: 500 MG/KG/D
Route of Application: Oral
Exposure Time: (MULTIGENERATIONS)
Result: Effects on Fertility: Male fertility index (e.g., # males impregnating females per # males exposed to fertile nonpregnant females).

Species: Rat
Dose: 91 GM/KG
Route of Application: Oral
Exposure Time: (MULTIGENERATION)
Result: Maternal Effects: Other effects. Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

Species: Rat
Dose: 4770 MG/KG
Route of Application: Oral
Exposure Time: (6-15D PREG)
Result: Maternal Effects: Other effects.
Species: Rat
Dose: 1000 PPM/6H
Route of Application: Inhalation
Exposure Time: (6-15D PREG)
Result: Maternal Effects: Other effects. Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).
Specific Developmental Abnormalities: Musculoskeletal system.

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION
Contact a licensed professional waste disposal service to dispose of this material. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT
Proper Shipping Name: Vinyl acetate, inhibited
UN#: 1301
Class: 3
Packing Group: Packing Group II
Hazard Label: Flammable liquid
PIH: Not PIH

IATA
Proper Shipping Name: Vinyl acetate, stabilized
IATA UN Number: 1301
Hazard Class: 3
Packing Group: II

Section 15 - Regulatory Information

EU DIRECTIVES CLASSIFICATION
Symbol of Danger: F
Indication of Danger: Highly Flammable.
R: 11
Risk Statements: Highly flammable.
S: 16 23 29 33
Safety Statements: Keep away from sources of ignition - no smoking. Do not breathe vapor. Do not empty into drains. Take precautionary measures against static discharges.

US CLASSIFICATION AND LABEL TEXT
Risk Statements: Harmful by inhalation. Irritating to eyes, respiratory system and skin. Limited evidence of a carcinogenic effect.
Safety Statements: Keep away from sources of ignition - no smoking. In case of contact with eyes, rinse immediately with
plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

UNITED STATES REGULATORY INFORMATION
SARA LISTED: Yes
DEMINIMIS: 1 %
NOTES: This product is subject to SARA section 313 reporting requirements.
TSCA INVENTORY ITEM: Yes

CANADA REGULATORY INFORMATION
WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: Yes
NDSL: No

Section 16 - Other Information

DISCLAIMER
For R&D use only. Not for drug, household or other uses.

WARRANTY
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.
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