1. Identification

Product Name  Vinyl acetate, stabilized
Cat No. : O5057-4; O5057-FB115
Synonyms Ethyl ethanoate; Vinyl A monomer; Ethyl acetate
Recommended Use Laboratory chemicals.
Uses advised against Not for food, drug, pesticide or biocidal product use

Details of the supplier of the safety data sheet

Company
Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410
Tel: (201) 796-7100

Emergency Telephone Number
CHEMTREC®, Inside the USA: 800-424-9300
CHEMTREC®, Outside the USA: 001-703-527-3887

2. Hazard(s) identification

Classification
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

<table>
<thead>
<tr>
<th>Hazard Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammable liquids</td>
<td>Category 2</td>
</tr>
<tr>
<td>Acute Inhalation Toxicity - Vapors</td>
<td>Category 4</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Category 2</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Category 3</td>
</tr>
<tr>
<td>Target Organs - Respiratory system.</td>
<td></td>
</tr>
</tbody>
</table>

Label Elements

Signal Word
Danger

Hazard Statements
Highly flammable liquid and vapor
Harmful if inhaled
Suspected of causing cancer
May cause respiratory irritation
Precautionary Statements

Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Keep away from heat/sparks/open flames/hot surfaces. - No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting/equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area

Response
IF exposed or concerned: Get medical attention/advice
Call a POISON CENTER or doctor/physician if you feel unwell

Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician if you feel unwell

Skin
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse

Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Ingestion
Do NOT induce vomiting

Fire
In case of fire: Use CO2, dry chemical, or foam for extinction

Storage
Store locked up
Store in a well-ventilated place. Keep cool

Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
None identified

3. Composition / information on ingredients

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinyl acetate</td>
<td>108-05-4</td>
<td>&gt; 99</td>
</tr>
<tr>
<td>Hydroquinone</td>
<td>123-31-9</td>
<td>&lt; 0.01</td>
</tr>
</tbody>
</table>

4. First-aid measures

Eye Contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
Obtain medical attention.

Skin Contact
Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.
Vinyl acetate, stabilized

5. Fire-fighting measures

Suitable Extinguishing Media  Carbon dioxide (CO\textsubscript{2}). Dry chemical. Use water spray to cool unopened containers. Cool closed containers exposed to fire with water spray.

Unsuitable Extinguishing Media  No information available

Flash Point  -8 °C / 17.6 °F

Method -  No information available

Autoignition Temperature  385 °C / 725 °F

Explosion Limits

<table>
<thead>
<tr>
<th></th>
<th>Upper</th>
<th>Lower</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity to Mechanical Impact</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>Sensitivity to Static Discharge</td>
<td>No information available</td>
<td>No information available</td>
</tr>
</tbody>
</table>

Specific Hazards Arising from the Chemical
Flammable. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated. Vapors may form explosive mixtures with air.

Hazardous Combustion Products
Carbon monoxide (CO) Carbon dioxide (CO\textsubscript{2})

Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

<table>
<thead>
<tr>
<th></th>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>N/A</td>
</tr>
</tbody>
</table>

6. Accidental release measures

Personal Precautions  Ensure adequate ventilation. Use personal protective equipment. Remove all sources of ignition. Take precautionary measures against static discharges.

Environmental Precautions  See Section 12 for additional ecological information. Do not flush into surface water or sanitary sewer system.

Methods for Containment and Clean Up
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Avoid dust formation. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Keep in suitable, closed containers for disposal.

7. Handling and storage

Handling  Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with skin and eyes. Do not breathe vapors or spray mist. Take precautionary measures against static discharges. Use only in area provided with appropriate exhaust ventilation. Use explosion-proof equipment. Use only non-sparking tools. Keep away from open flames, hot surfaces and sources of ignition. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.
Storage


8. Exposure controls / personal protection

Exposure Guidelines

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
<th>Mexico OEL (TWA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinyl acetate</td>
<td>TWA: 10 ppm STEL: 15 ppm</td>
<td>(Vacated) TWA: 10 ppm STEL: 60 mg/m³</td>
<td>Ceiling: 4 ppm Ceiling: 15 mg/m³</td>
<td>TWA: 10 ppm STEL: 20 ppm</td>
</tr>
<tr>
<td>Hydroquinone</td>
<td>TWA: 1 mg/m³</td>
<td>(Vacated) TWA: 2 mg/m³ STEL: 30 mg/m³</td>
<td>IDLH: 50 mg/m³ Ceiling: 2 mg/m³</td>
<td>TWA: 30 mg/m³ STEL: 60 mg/m³</td>
</tr>
</tbody>
</table>

Legend

ACGIH - American Conference of Governmental Industrial Hygienists
OSHA - Occupational Safety and Health Administration
NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

Engineering Measures

Use explosion-proof electrical/ventilating/lighting/equipment. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/face Protection

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Clear</td>
</tr>
<tr>
<td>Odor</td>
<td>sweet</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>7</td>
</tr>
<tr>
<td>Melting Point/Range</td>
<td>-93 °C / -135.4 °F</td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>72 - 73 °C / 161.6 - 163.4 °F</td>
</tr>
<tr>
<td>Flash Point</td>
<td>-8 °C / 17.6 °F</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No information available</td>
</tr>
<tr>
<td>Flammability (solid,gas)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability or explosive limits</td>
<td></td>
</tr>
<tr>
<td>Upper</td>
<td>14.0%</td>
</tr>
<tr>
<td>Lower</td>
<td>2.6%</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No information available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No information available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.930</td>
</tr>
<tr>
<td>Solubility</td>
<td>23 g/L @ 20 °C</td>
</tr>
<tr>
<td>Partition coefficient; n-octanol/water</td>
<td>No data available</td>
</tr>
</tbody>
</table>
10. Stability and reactivity

Reactive Hazard
None known, based on information available

Stability
May form explosive peroxides. Stable under normal conditions. Light sensitive.

Conditions to Avoid

Incompatible Materials
Acids, Bases, oxygen, Peroxides, Acid anhydrides, Metals, Butyl rubber

Hazardous Decomposition Products
Carbon monoxide (CO), Carbon dioxide (CO$_2$)

Hazardous Polymerization
Hazardous polymerization may occur.

11. Toxicological information

Acute Toxicity

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral Oral ( Rat )</th>
<th>LD50 Dermal ( Rabbit )</th>
<th>LC50 Inhalation ( Rat ) 4 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinyl acetate</td>
<td>LD50 = 2900 mg/kg</td>
<td>LD50 = 2335 mg/kg</td>
<td>LC50 = 11.4 mg/L</td>
</tr>
<tr>
<td></td>
<td>( Rat )</td>
<td>( Rabbit )</td>
<td>4 h</td>
</tr>
<tr>
<td>Hydroquinone</td>
<td>LD50 = 298 mg/kg</td>
<td>LD50 = 74800 mg/kg</td>
<td>LC50 = 11400 mg/m$^3$</td>
</tr>
<tr>
<td></td>
<td>( Rat )</td>
<td>( Rabbit )</td>
<td>4 h</td>
</tr>
</tbody>
</table>

Toxicologically Synergistic Products
No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation
No information available

Sensitization
No information available

Carcinogenicity
Possible cancer hazard. May cause cancer based on animal data. The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>IARC</th>
<th>NTP</th>
<th>ACGIH</th>
<th>OSHA</th>
<th>Mexico</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinyl acetate</td>
<td>108-05-4</td>
<td>Group 2B</td>
<td>Not listed</td>
<td>A3</td>
<td>X</td>
<td>A3</td>
</tr>
<tr>
<td>Hydroquinone</td>
<td>123-31-9</td>
<td>Not listed</td>
<td>Not listed</td>
<td>A3</td>
<td>Not listed</td>
<td>Not listed</td>
</tr>
</tbody>
</table>

Mutagenic Effects
Not mutagenic in AMES Test

Reproductive Effects
No information available.

Developmental Effects
No information available.

Teratogenicity
No information available.

STOT - single exposure
Respiratory system

STOT - repeated exposure
None known

Aspiration hazard
No information available
Symptoms / effects, both acute and delayed
Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

Endocrine Disruptor Information

<table>
<thead>
<tr>
<th>Component</th>
<th>EU - Endocrine Disrupters Candidate List</th>
<th>EU - Endocrine Disruptors - Evaluated Substances</th>
<th>Japan - Endocrine Disruptor Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinyl acetate</td>
<td>Group III Chemical</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

Other Adverse Effects
See actual entry in RTECS for complete information.

12. Ecological information

Ecotoxicity
This product contains the following substance(s) which are hazardous for the environment.

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Algae</th>
<th>Freshwater Fish</th>
<th>Microtox</th>
<th>Water Flea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinyl acetate</td>
<td>Not listed</td>
<td>LC50: 26.1 - 36.63 mg/L, 96h static (Poecilia reticulata)</td>
<td>EC50 = 2080 mg/L 5 min</td>
<td>EC50: 52 mg/L, 24h (Daphnia magna)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LC50: 15.04 - 21.54 mg/L, 96h static (Lepomis macrochirus)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LC50: 14 mg/L, 96h static (Pimephales promelas)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydroquinone</td>
<td>EC50: 13.5 mg/L, 120h (Desmodesmus subspicatus)</td>
<td>LC50: 0.17 mg/L, 96h (Brachydanio rerio)</td>
<td>EC50 = 0.038 mg/L 15 min</td>
<td>EC50: 0.29 mg/L, 48h (Daphnia magna)</td>
</tr>
<tr>
<td></td>
<td>EC50: 0.335 mg/L, 72h (Pseudokirchneriella subcapitata)</td>
<td>LC50: 0.1 - 0.18 mg/L, 96h static (Pimephales promelas)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LC50: 0.044 mg/L, 96h flow-through (Pimephales promelas)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LC50: 0.044 mg/L, 96h flow-through (Oncorhynchus mykiss)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Persistence and Degradability
Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation
No information available.

Mobility
Will likely be mobile in the environment due to its volatility.

<table>
<thead>
<tr>
<th>Component</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinyl acetate</td>
<td>0.73</td>
</tr>
<tr>
<td>Hydroquinone</td>
<td>0.5</td>
</tr>
</tbody>
</table>

13. Disposal considerations

Waste Disposal Methods
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT
- UN-No: UN1301
- Proper Shipping Name: VINYL ACETATE, STABILIZED
- Hazard Class: 3
- Packing Group: II

TDG
- UN-No: UN1301
- Proper Shipping Name: VINYL ACETATE, STABILIZED
15. Regulatory information

International Inventories

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AICS</th>
<th>IECSC</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinyl acetate</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>203-545-4</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Hydroquinone</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>204-617-8</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Legend:
- X - Listed
- E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
- F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
- N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
- P - Indicates a commenced PMN substance
- R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
- S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
- T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
- XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).
- Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
- Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b)
Not applicable

SARA 313

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinyl acetate</td>
<td>108-05-4</td>
<td>&gt; 99</td>
<td>0.1</td>
</tr>
<tr>
<td>Hydroquinone</td>
<td>123-31-9</td>
<td>&lt; 0.01</td>
<td>1.0</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories

- Acute Health Hazard: No
- Chronic Health Hazard: Yes
- Fire Hazard: Yes
- Sudden Release of Pressure Hazard: No
- Reactive Hazard: No

CWA (Clean Water Act)

<table>
<thead>
<tr>
<th>Component</th>
<th>CWA - Hazardous Substances</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinyl acetate</td>
<td>X</td>
<td>5000 lb</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Clean Air Act

<table>
<thead>
<tr>
<th>Component</th>
<th>HAPS Data</th>
<th>Class 1 Ozone Depleters</th>
<th>Class 2 Ozone Depleters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinyl acetate</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Hydroquinone</td>
<td>X</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
OSHA Occupational Safety and Health Administration
Not applicable

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

<table>
<thead>
<tr>
<th>Component</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA EHS RQs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinyl acetate</td>
<td>5000 lb</td>
<td>5000 lb</td>
</tr>
<tr>
<td>Hydroquinone</td>
<td>100 lb</td>
<td>100 lb</td>
</tr>
</tbody>
</table>

California Proposition 65
This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Component</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinyl acetate</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Hydroquinone</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

U.S. Department of Transportation

Reportable Quantity (RQ): Y
DOT Marine Pollutant: N
DOT Severe Marine Pollutant: N

U.S. Department of Homeland Security
This product contains the following DHS chemicals:

<table>
<thead>
<tr>
<th>Component</th>
<th>DHS Chemical Facility Anti-Terrorism Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vinyl acetate</td>
<td>11250 lb STQ</td>
</tr>
</tbody>
</table>

Other International Regulations

Mexico - Grade
No information available

16. Other information

Prepared By
Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

Creation Date 21-Sep-2009
Revision Date 24-May-2017
Print Date 24-May-2017
Revision Summary
This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS