1 Identification

- Product identifier
- Trade name: AD&E
- Article number: EZP-043
- Recommended use and restriction on use
- Recommended use:
  Animal feed additive
  Vitamins
- Restrictions on use: Contact manufacturer.
- Details of the supplier of the Safety Data Sheet
- Manufacturer/Supplier:
  EZ PAK, LLC
  P.O. BOX 185
  JEFFERSON, GA 30549
- Distributor:
  Clear View Enterprises, LLC
  451 Agnes Drive Tontitown, AR 72770
  (800) 255-3924
- Emergency telephone number:
  ChemTel Inc.
  (800)255-3924, +1 (813)248-0585

2 Hazard(s) identification

Emergency Overview

Caution

<table>
<thead>
<tr>
<th>Physical state</th>
<th>liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odour</td>
<td>No information available.</td>
</tr>
</tbody>
</table>

GHS Classification

Acute toxicity (Oral) : Category 4
Skin irritation : Category 2
Reproductive toxicity : Category 1B

GHS Label element

Hazard pictograms

Signal word : Danger
Hazard statements : H302 Harmful if swallowed.
H315 Causes skin irritation.
H360 May damage fertility or the unborn child.

Precautionary statements : Prevention:
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been
read and understood.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves.
P281 Use personal protective equipment as required.

**Response:**
P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P308 + P313 IF exposed or concerned: Get medical advice/attention.
P362 Take off contaminated clothing and wash before reuse.

**Storage:**
P405 Store locked up.

**Disposal:**
P501 Dispose of contents/container to an approved waste disposal plant.

---

### Potential Health Effects

**Primary Routes of Entry**

- **Skin Absorption**

**Skin**

- May cause skin irritation.

**Chronic Exposure**

- This product contains a material that may cause adverse reproductive effects.*

**Aggravated Medical Condition**

- None known.

**Symptoms of Overexposure**

- No specific symptoms known.

### Carcinogenicity:

**IARC**

- No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**ACGIH**

- No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

**OSHA**

- No component of this product present at levels greater than or equal to 0.1% is identified as carcinogen or potential carcinogen by OSHA.

**NTP**

- No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

### Additional hazards and advice

- Women of childbearing age must avoid any overexposure.
3 Composition/ Information on Ingredients

Brief description of the product : Mixture

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS-No.</th>
<th>Weight percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retinyl propionate</td>
<td>7069-42-3</td>
<td>10 – 20</td>
</tr>
<tr>
<td>Polyethylene glycol</td>
<td>25322-68-3</td>
<td>10 – 20</td>
</tr>
<tr>
<td>Cholecalciferol (Vitamin D3)</td>
<td>67-97-0</td>
<td>0.1 - 1</td>
</tr>
</tbody>
</table>

4 First-aid Measures

General advice : Move out of dangerous area. Show this safety data sheet to the doctor in attendance. After any accidental exposure women should seek medical advice from a physician.

If inhaled : Move to fresh air. Consult a physician after significant exposure.

In case of skin contact : Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. If symptoms persist, call a physician.

In case of eye contact : Immediately flush eye(s) with plenty of water. Remove contact lenses. Protect unharmed eye. Keep eye(s) wide open while rinsing. If eye irritation persists, consult a specialist.

If swallowed : Clean mouth with water and drink afterwards plenty of water. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. Obtain medical attention.

Most important symptoms And effects, both acute and delayed : No specific symptoms known.

Notes to physician : Treat symptomatically.

5 Firefighting Measures

Flammable properties

Flash point : No data available

Ignition temperature : not determined

Lower explosion limit : not determined

Upper explosion limit : not determined
**Fire fighting**

Suitable extinguishing media: Alcohol-resistant foam
Dry chemical
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Further Information: Collect contaminated fire extinguish water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

**Protective equipment and precautions for firefighters**

Specific hazards during firefighting: None known.

Special protective equipment for firefighters: In the event of a fire, wear self-contained breathing apparatus.

**6 Accidental Release Measures**

Personal precautions, protective equipment and emergency procedures: Evacuate personnel to safe areas.
Use personal protective equipment.
Ensure adequate ventilation.

Environmental precautions: Do not flush into surface water or sanitary sewer system.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and 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.

**7 Handling and Storage**

Advice on safe handling: Avoid exposure – obtain special instructions before use.
For personal protection see section 8.
Dispose of rinse water in accordance with local and national regulations.
Smoking, eating and drinking should be prohibited in the application area.

Advice on protection against fire and explosion: Take necessary action to avoid static electricity discharge.
Product will burn under fire conditions.

Conditions for safe storage: Store at room temperature.
**Safety Data Sheet**  
acc. to OSHA HCS (29 CFR 1910.1200)

**Components with workplace control parameters**

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters/ Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retinyl propionate</td>
<td>7069-42-3</td>
<td>TWA</td>
<td>0.24 mg/m3</td>
<td>DSM Internal Limit</td>
</tr>
<tr>
<td>polyethylene glycol</td>
<td>25322-68-3</td>
<td>TWA (aerosol)</td>
<td>10 mg/m3</td>
<td>US WEEL</td>
</tr>
</tbody>
</table>

**Personal protective equipment**

- **Respiratory protection**: In case of vapor formation use a respirator with an approved filter.
- **Hand protection**: Glove material: for example nitrile rubber  
  Consider the hazard characteristics of this product and any special workplace conditions when selecting the appropriate type of protective gloves.
- **Eye Protection**: Safety glasses with side-shields
- **Skin and body protection**: Choose body protection according to the amount and concentration of the dangerous substance at the workplace.
- **Hygiene measures**: When using do not eat or drink. When using do not smoke. Avoid contact with skin, eyes and clothing.
### 9 Physical and Chemical Properties

#### 9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>No information available</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point/ range</td>
<td>not determined</td>
</tr>
<tr>
<td>Boiling point/ boiling range</td>
<td>not determined</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>not determined</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>not determined</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>not determined</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>not determined</td>
</tr>
<tr>
<td>Relative vapor density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Density</td>
<td>not determined</td>
</tr>
<tr>
<td>Water solubility</td>
<td>not determined</td>
</tr>
<tr>
<td>Partition coefficient: n- octanol/ water</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Ignition temperature</td>
<td>not determined</td>
</tr>
<tr>
<td>Thermal decomposition</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>not determined</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

#### 9.2 Other Information

No data available
### 10 Stability and Reactivity

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactivity</td>
<td>No hazards to be specially mentioned.</td>
</tr>
<tr>
<td>Chemical stability</td>
<td>Stable under recommended storage conditions.</td>
</tr>
<tr>
<td>Possibility of hazardous reactions</td>
<td>Possible incompatibility with materials listed under section 10.5.</td>
</tr>
<tr>
<td>Conditions to avoid</td>
<td>Heat</td>
</tr>
<tr>
<td>Incompatible materials</td>
<td>Strong acids and strong bases</td>
</tr>
<tr>
<td></td>
<td>Strong oxidizing agents</td>
</tr>
<tr>
<td>Hazardous decomposition products</td>
<td>No decomposition if used as directed.</td>
</tr>
</tbody>
</table>

### 11 Toxicological Information

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oral toxicity</td>
<td>Acute toxicity estimate: 1,785 mg/kg (Calculation method)</td>
</tr>
<tr>
<td>Acute inhalation toxicity</td>
<td>Acute toxicity estimate: &gt;10 mg/l (Calculation method)</td>
</tr>
<tr>
<td>Acute dermal toxicity</td>
<td>Acute toxicity estimate: &gt;5,000 mg/kg (Calculation method)</td>
</tr>
<tr>
<td>Skin irritation</td>
<td>May cause skin irritation and/or dermatitis.</td>
</tr>
<tr>
<td>Eye irritation</td>
<td>May irritate eyes.</td>
</tr>
<tr>
<td>Sensitization retinyl propionate</td>
<td>Did not cause sensitization on laboratory animals. (Guinea Pig, Maximization Test (GPMT), OECD Test Guideline 406)</td>
</tr>
<tr>
<td></td>
<td>Positive photo allergenic skin reaction (Guinea pig)</td>
</tr>
<tr>
<td></td>
<td>The effect is probably caused by degradation products or by decomposition products.</td>
</tr>
<tr>
<td>polyethylene glycol</td>
<td>Does not cause skin sensitization. (Guinea pig, Buehler Test, OECD Test Guideline 406)</td>
</tr>
<tr>
<td>Carcinogenicity cholecalcifrol</td>
<td>No indication for carcinogenicity known.</td>
</tr>
<tr>
<td>Genotoxicity in vitro retinyl propionate</td>
<td>not mutagenic, not genotoxic (Various test systems)</td>
</tr>
</tbody>
</table>
polyethylene glycol : not mutagenic (Ames test, OECD Test Guideline 471)
Genotoxicity in vivo cholecalciferol : not genotoxic (Rat, Bone marrow, Mutagenicity (micronucleus Test))
Tertogenicity retinyl propionate : Teratogenic embryotoxic
cholecalciferol : May lead to malformation at dose levels that cause maternal toxicity
                      NOAEL: 0.0095 mg/ kg bw/d (Rabbit female, OECD Test Guideline 414)
STOT- repeatd exposure cholecalciferol : NOAEL (Oral, Rat): 0.06mg/kg  bw/ d
                  Sub-chronic toxicity study (90-day)  
                  (OECD Test Guideline 408)
                  Causes damage t organs through prolonged or repeated exposure.
Experience with human exposure retinyl Propionate : RDA (Recommended Daily Allowance) 0.8 mg pure vitamin A (retinol) per day
                      established for men
                      RDA (Recommended Daily Allowance) ca. 0.7 mg pure vitamin A (retinol) per day
                      established for women
cholecalciferol : RDA (Recommended Daily Allowance) 0.005-0.01 mg
Experience with human exposure retinyl propionate : Acute overdose produces the following symptoms:
                      Headache, Irritability, Tiredness, Drowsiness, Nausea, Vomiting, Signs of increased intracranial pressure, Generalized desquamation of the skin (after ca. 24 hours)
cholecalciferol : Acute overdose produces the following symptoms:
                      Nausea, Vomiting, Headache, Weakness, Abdominal pain, Dry mouth, Metallic taste, Loss of appetite
Further information : May cause irritation of respiratory tract

### 12 Ecological Information

**Toxicity**

Toxicity to fish
polyethylene glycol : Cyprinus carpio (Carp)
LC50 (96 h) > 100 mg/ l
(OECD Test Guideline 203)
### Toxicity to daphnia and other aquatic invertebrates retinyl propionate

<table>
<thead>
<tr>
<th>Substance</th>
<th>Organism</th>
<th>EC50 (48 h)</th>
<th>EC0 (48 h)</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retinyl propionate</td>
<td>Daphnia magna (Water flea)</td>
<td>6.8 mg/l</td>
<td>1.8 mg/l</td>
<td>OECD Test Guideline 202</td>
</tr>
<tr>
<td>Polyethylene glycol</td>
<td>Daphnia magna (Water flea)</td>
<td>&gt; 100 mg/l</td>
<td></td>
<td>OECD Test Guideline 202</td>
</tr>
</tbody>
</table>

### Toxicity to algae retinyl propionate

<table>
<thead>
<tr>
<th>Substance</th>
<th>Organism</th>
<th>EC50 (72 h)</th>
<th>EC50 (72 h) (nominal concentration)</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retinyl propionate</td>
<td>Desmodesmus subspicatus (green algae)</td>
<td>9.1 mg/l</td>
<td>24.6 mg/l</td>
<td>OECD Test Guidelines 201</td>
</tr>
</tbody>
</table>

### Toxicity to bacteria retinyl propionate

- Activated sludge: Concentration of the substance 22.9 mg/l
  - No inhibition was observed under the biodegradation test conditions.
  - (OECD Test Guideline 301B)

No data is available on the product itself

### Persistence and degradability

#### Biodegradability

<table>
<thead>
<tr>
<th>Substance</th>
<th>Biodegradability</th>
<th>Percentage</th>
<th>Duration</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retinyl propionate</td>
<td>Not readily biodegradable</td>
<td></td>
<td></td>
<td>OECD Test Guidelines 301 B</td>
</tr>
<tr>
<td>Polyethylene glycol</td>
<td>Readily biodegradable</td>
<td>&gt;70% (21 d)</td>
<td></td>
<td>OECD Test Guidelines 301A</td>
</tr>
<tr>
<td>Cholecalciferol</td>
<td>Not readily biodegradable</td>
<td>&lt;= 7% (28 d)</td>
<td></td>
<td>OECD Test Guidelines 301C</td>
</tr>
</tbody>
</table>

No data is available on the product itself

### Bio accumulative potential

- Bioaccumulation: No data available
- Partition coefficient: n-octanol/water: Not applicable
### Mobility in soil

- Distribution among environmental compartments: No data available

### Result of PBT and vPvB assessment

- Assessment: Not applicable

### Other adverse effects

- Regulation: 40CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone- CAA Section 602 Class 1 Substances
- Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App. A + B).

### Additional ecological information

- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### 13 Disposal Considerations

- **Disposal methods**
  - Waste from residues: User must determine if any wastes generated exhibit hazardous characteristics as per 40 CFR Part 261 or ditches with chemical or used container. Do not dispose of waste into sewer. Offer surplus and non-recyclable solutions to licensed disposal company.
  - Contaminated packaging: Dispose of as unused product. Do not re-use empty containers.

### 14 Transport Information

- **International Regulation**
  - **UNRTDG**: Not Regulated as a dangerous good
  - **IATA-DGR**: Not Regulated as a dangerous good
  - **IMDG-Code**: Not Regulated as a dangerous good
  - **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**: Not applicable for product as supplied.
### National Regulations

49 CFR

Not regulated as a dangerous good

Remarks: Not classified as dangerous in the meaning of transport regulations.

### 15 Regulatory Information

<table>
<thead>
<tr>
<th>TSCA list</th>
<th>Not relevant</th>
</tr>
</thead>
</table>

Not relevant

### EPCRA – Emergency Planning and Community Right-to-Know Act

#### CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

#### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ

#### SARA 311/312 Hazards

- Acute Health Hazard
- Chronic Health Hazard

#### SARA 302

- No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

#### SARA 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### Clean Air Act

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC’s (40 CFR 60.489):

- polyethylene glycol 25322-68-3 12.3186%

### Clean Air Act

This product does not contain any Hazardous Substances listed under the U.S. Clean Water Act, Section 311, Table 116.4A
This product does not contain any Hazardous Chemicals listed under the U.S. Clean Water Act, Section 311, Table 117.3.
This product does not contain any toxic pollutants listed under the U.S. Clean Water Act, Section 307.

**Massachusetts Right-To-Know**
No components are subject to the Massachusetts Right-To-Act.

**Pennsylvania Right-To-Know**
- Polyoxymethylene monoleate: 9004-96-0 30 – 50%
- 3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-yl acetate: 7695-91-2 20 – 30%
- Retinyl propionate: 7069-42-3 10 – 20%
- Polyethylene glycol: 25322-68-3 10 – 20%

**New Jersey Right-To-Know**
- Polyoxymethylene monoleate: 9004-96-0 30 – 50%
- 3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-trimethyltridecyl)-2H-benzopyran-6-yl acetate: 7695-91-2 20 – 30%
- Retinyl propionate: 7069-42-3 10 – 20%
- Polyethylene glycol: 25322-68-3 10 – 20%

**The components of this product are reported in the following inventories:**
- **TSCA**: Not On TSCA Inventory
- **REACH**: Retinyl propionate

### 16 Other Information

**Further Information**

**HMIS III:**

**NFPA:**

- Health: 3*
- Flammability: 1
- Physical Hazard: 0
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 a 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.