



**WEAN-D + E**

**SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

PRODUCT NAME: WEAN-D+E

MANUFACTURER: GlycoMyr, Inc.  
 ADDRESS: 2325 N. Loop Drive  
 Suite 6600  
 Ames, IA 50010, USA

EMERGENCY PHONE: 515-231-4636

CHEMICAL NAME: Vitamin D<sub>3</sub>, cholecalciferol; Vitamin E, d-alpha-tocopherol.

PRODUCT USE: Oral vitamin D supplement for newborn pigs  
 PREPARED BY: GlycoMyr, Inc., Ames, IA

SECTION 1 NOTES: Wean-D is a solution of vitamin D<sub>3</sub> solubilized in ethanol and mixed with peanut oil containing anti-oxidants (TBHQ and Citric acid) and anti-foaming agent (Dimethylpolysiloxane).

**SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS**

<u>INGREDIENT:</u>	<u>CAS NO.</u>	<u>% WT</u>	<u>Permissible Exposure Limit</u>	<u>RTECS Number</u>
Vitamin D <sub>3</sub>	67-97-0	0.1	Unknown	VS 2900000
d-alpha tocopherol	59-02-9	10%	Unknown	GP 8280000
Peanut oil (Arachis oil)	8002-03-7	~87%	Unknown	RX 2830000
Ethanol (Ethyl alcohol)	64-17-5	~1.8%	Unknown	KQ 6300000
Tertiary Butylhydroquinone (TBHQ)	1948-33-0	~0.05%	Unknown	MX 4375000
Citric acid	77-92-9	~0.25%	Unknown	GE 7350000
Dimethylpolysiloxane	9016-00-6	~0.02%	Unknown	TQ 2690000

Appearance: Light yellow liquid

SECTION 2 NOTES: All ingredients are commonly used in human and animal food products. Vitamin D<sub>3</sub> and d-alpha tocopherol are the active components of this preparation and the high vitamin D<sub>3</sub> content of this preparation determines the Hazard Potential. Peanut oil, d-alpha tocopherol, and ethanol are flammable.

Hazard Symbol: T+ very toxic  
 Risk Phrases: R26 - Very toxic by inhalation.  
 R24 - Toxic in contact with skin.  
 R28- Very toxic if swallowed.  
 R48/25 - Danger of serious damage to health by prolonged exposure

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## SECTION 3: HAZARDS IDENTIFICATION

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**EMERGENCY OVERVIEW:** Material has not been tested as a whole so information below is based on one or more of its ingredients. Vitamin D is present at a concentration that would prove toxic to humans and other animals if ingested.

**ROUTES OF ENTRY:** Oral, inhaled, prolonged contact with skin

**ACUTE HEALTH HAZARDS:** Vitamin D intoxication causes an elevation in blood calcium which may lead to renal failure causing an inability to concentrate the urine, a decrease in urine production, painful urination, and presence of blood in the urine. May cause gastrointestinal effects such as nausea and vomiting, diarrhea or constipation, cramps and loss of appetite. May cause headache. May cause skin irritation such as itching, redness, skin peeling, particularly in those with allergy to any of the components.

**CHRONIC HEALTH HAZARDS:** Renal failure and calcification of non-osseous tissue.

**MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:** Persons with previous problems with kidney stones (renal and urinary calculi). Pre-existing skin conditions may be aggravated by repeated overexposures to this product. Persons with peanut allergy should avoid exposure to this material.

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## SECTION 4: FIRST AID MEASURES

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**EYES:** May cause eye irritation. The toxicological properties of this material have not been fully investigated.

**SKIN:** May cause skin irritation. The toxicological properties of this material have not been fully investigated.

**INGESTION:** May cause irritation of the digestive tract. Absorption of the vitamin D in this material may lead to vitamin D intoxication. This may cause hypercalcemia and calcification of kidneys and other tissues.

**INHALATION:** May cause respiratory tract irritation. The toxicological properties of this material have not been fully investigated.

### NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

**INGESTION:** If this product is swallowed, **CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION.** If person is conscious and alert, give 1-2 cups of water or milk and induce vomiting immediately. Rinse mouth with cold water. Seek medical attention. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or unable to swallow. If victim is convulsing, maintain an open airway and obtain immediate medical attention.

**EYE CONTACT:** Flush with plenty of water for at least 15 minutes.

**SKIN CONTACT:** Wash affected skin with plenty of soap and water. Remove and wash contaminated clothing and shoes.

**INHALATION:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

**SECTION 4 NOTES:** Vitamin D intoxication is likely if this material is ingested by humans or non-target animals.

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## SECTION 5: FIRE-FIGHTING MEASURES

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**GENERAL INFORMATION:** Containers can build up pressure if exposed to heat and/or fire. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH approved (or equivalent), and full protective gear. Use water spray to keep fire-exposed containers cool.

### FLASH POINT:

F: 541

C: 283

**METHOD USED:** Based on peanut oil content.

### AUTOIGNITION TEMPERATURE:

F: 829

C: 443

**EXTINGUISHING MEDIA:** Use agent most appropriate to extinguish fire. Use water spray jet, dry chemical, carbon dioxide, or appropriate foam. **APPLY WATER FOG OR MIST GENTLY--HEAVY APPLICATIONS TO HOT OIL COULD CAUSE FOAMING. AVOID CONTACT WITH HOT OIL.**

**HAZARDOUS DECOMPOSITION PRODUCTS:** Irritating and highly toxic gases may be generated by thermal decomposition or combustion.

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SECTION 5 NOTES: Don't allow the extinguishing water to drain into rivers until processed.

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

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ACCIDENTAL RELEASE MEASURES: Use proper personal protective equipment as indicated in section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. See Section 13 for disposal information.

**Small Spills:** Wear goggles and gloves while wiping up small spills of this product with polypad or sponge.

**Large Spills:** Trained personnel following pre-planned procedures should handle non-incident releases. Access to the spill areas should be restricted. Protective apparel should be used with a respirator when there is any danger of mists or sprays being generated. Minimum Personal Protective Equipment should be rubber gloves, rubber boots, face shield, and Tyvek suit. Dispersing mists or sprays into surrounding air and possibly inhaling them is a serious matter and should be treated as such. Minimum level of personal protective equipment for releases in which the level of oxygen is less than 19.5% or is unknown must be Level B: triple-gloves (rubber gloves and nitrile gloves over latex gloves), chemical resistant suit and boots, hard hat, and Self-Contained Breathing Apparatus. Absorb spilled liquid using polypads or other suitable absorbent material. Prevent material from entering sewer or confined spaces, waterways, soil or public waters. Monitor area and confirm levels are below exposure limits given in Section 8 (Exposure Controls-Personal Protection), if applicable, before non-response personnel are allowed into the spill area.

Decontaminate the spill area using detergent and water. Place all spill residue in an appropriate container and seal. Dispose of in accordance with Federal, State, and local procedures (see Section 13, Disposal Considerations).

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## SECTION 7: HANDLING AND STORAGE

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**WORK PRACTICES AND HYGIENE PRACTICES:** As with all chemicals, avoid getting this product ON YOU or IN YOU. Do not eat, drink, smoke, or apply cosmetics while handling this product. Wash hands thoroughly after handling this product or equipment and containers that contain this product. Follow SPECIFIC USE INSTRUCTIONS supplied with this product. Particular care in working with this product must be practiced in pharmacies and other preparation areas, during manufacture of this product, and during patient administration.

**HANDLING:** Wash thoroughly after handling with soap and water. Wash hands before eating. Remove contaminated clothing and wash before re-use. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

**STORAGE:** Keep container closed when not in use. Keep away from children to avoid accidental ingestion. Store in a cool, dry, well-ventilated area.

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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OSHA Vacated PELs: Vitamin D<sub>3</sub> : No OSHA Vacated PELs are listed for this chemical.

**RESPIRATORY PROTECTION:** Use adequate ventilation to keep airborne concentrations low. A respirator is not required for routine conditions of use of this product. If respiratory protection is needed, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, or Canadian CSA Standard Z94.4-02.

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

**SKIN PROTECTION:** Wear appropriate protective gloves to prevent skin exposure.

**OTHER PROTECTIVE CLOTHING OR EQUIPMENT:** Wear appropriate protective clothing to prevent skin exposure.

**WORK HYGIENIC PRACTICES:** Wash hands thoroughly after use with soap and water.

**EXPOSURE GUIDELINES:** Not determined

**SECTION 8 NOTES:**

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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**APPEARANCE:** Clear Light yellow

**ODOR:** mild, pleasant odor

**PHYSICAL STATE:** Liquid

**pH AS SUPPLIED:** Not available

**BOILING POINT:** Not available

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MELTING POINT: Not available  
FREEZING POINT: Not available  
VAPOR PRESSURE (mmHg): Not available  
SPECIFIC GRAVITY (H<sub>2</sub>O = 1): 0.917  
EVAPORATION RATE: Not available

SOLUBILITY IN WATER: Not soluble in water

VISCOSITY: High

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## SECTION 10: STABILITY AND REACTIVITY

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STABILITY: Shelf life – 9 months.

CONDITIONS TO AVOID (STABILITY): Avoid strong light and heat.

INCOMPATIBILITY (MATERIAL TO AVOID): Strong reducing and oxidizing agents, acids and alkalis.

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

HAZARDOUS POLYMERIZATION: Has not been reported.

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## SECTION 11: TOXICOLOGICAL INFORMATION

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TOXICOLOGICAL INFORMATION: Vitamin D<sub>3</sub> is a biologically active substance. This product is intended for use in swine only. For people who ingest this product or permit prolonged contact with skin it may cause calcification or hypercalcemia. Each ml of this material contains 2 mg vitamin D<sub>3</sub> (80,000 IU vitamin D) and 0.1 g d-alpha tocopherol (100 IU vitamin E). The daily requirement for vitamin D in humans is 400-600 IU / day.

Individuals who have had allergic reactions to products containing peanut oil or any other components of this product may experience allergic reactions to this product.

Vitamin D<sub>3</sub> – Acute single Oral dose LD<sub>50</sub> in dog – 3,520,000 IU / kg BWT  
Acute Oral LD<sub>50</sub> in rats: 352 mg/kg and 42 mg/kg for males, and 619 mg/kg for females.  
Acute Dermal LD<sub>50</sub> rat: 60 mg / kg.  
Acute Dermal LD<sub>50</sub> in rabbits: 2000 mg/kg.  
Acute LD<sub>50</sub> (oral, duck) > 2 g/kg

Chronic oral dose: Not established in man, however no toxicity has been reported for humans ingesting < 10,000 IU vitamin D<sub>3</sub> / day. Chronic ingestion of this product caused by poor hygiene practices may cause irritability, vomiting, loss of appetite, headache, dry, itchy skin, peeling skin, hypercalcemia, and renal failure.

TDLo (oral, infant) = 39 mg/kg/34 weeks/intermittent; Behavioral: anorexia (human), irritability; Gastrointestinal: decreased motility or constipation

TDLo (oral, rat) = 1820 µg/kg/26 weeks/intermittent; Kidney, Ureter, Bladder: other changes; Endocrine: other changes, changes in adrenal weight

TDLo (subcutaneous, rat) = 90 mg/kg/female 12–20 days after conception; Reproductive: Effects on Embryo or Fetus: fetotoxicity (except death, e.g., stunted fetus)

d-alpha tocopherol – oral toxicity: LD<sub>50</sub> (rat) > 12,000 mg/kg

**CARCINOGENIC INFORMATION:** The components of this product are not found on the following lists: U.S. EPA, U.S. NTP, U.S. OSHA, U.S. NIOSH, GERMAN MAK, IARC, or ACGIH and therefore are neither considered to be nor suspected to be cancer-causing agents by these agencies.

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## SECTION 12: ECOLOGICAL INFORMATION

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**ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.**

**ENVIRONMENTAL STABILITY:** This product has not been tested for persistence, biodegradability, bioconcentration, soil absorption or mobility.

**EFFECT OF MATERIAL ON PLANTS or ANIMALS:** No specific information is currently available on the effect of this product on plants or animals in the environment. This product may be harmful to contaminated plant and animal life, especially in large quantities.

**EFFECT OF CHEMICAL ON AQUATIC LIFE:** Release of this product to an aquatic environment may be harmful to aquatic plant and animal life in contaminated bodies of water, especially in large quantities. Aquatic toxicity data for components of this product are available as follows: VITAMIN D<sub>3</sub>:

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LC<sub>50</sub> (*Leuciscus idus*) 96 hours = >10,000 mg/L  
EC/LC<sub>10</sub> (*Pseudomonas putida*) 0.5 hours = >10,000 mg/L

**ENVIRONMENTAL EXPOSURE CONTROLS:** Controls should be engineered to prevent release to the environment, including procedures to prevent spills, atmospheric release and release to waterways.

**OTHER ADVERSE EFFECTS:** No component of this product is known to have ozone depletion potential.

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## SECTION 13: DISPOSAL CONSIDERATIONS

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**WASTE DISPOSAL METHOD:** The waste cast-off or containers should be deposited or set on fire according to State standards. Waste water containing product should be treated through proper wastewater treatment technique. Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

U.S. EPA WASTE NUMBER: Not applicable to wastes consisting only of this product.

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## SECTION 14: TRANSPORT INFORMATION

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### U.S. DEPARTMENT OF TRANSPORTATION

PROPER SHIPPING NAME: Not regulated as a hazardous material.

HAZARD CLASS:

ID NUMBER:

PACKING GROUP:

LABEL STATEMENT:

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## SECTION 15: REGULATORY INFORMATION

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Hazardous components: vitamin D<sub>3</sub>, cholecalciferol

### UNITED STATES REGULATIONS:

**U.S. SARA REPORTING REQUIREMENTS:** The components of this product are not subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.

**U.S. SARA THRESHOLD PLANNING QUANTITY:** There are no specific Threshold Planning Quantities for any component of this product. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) therefore applies, per 40 CFR 370.20.

**U.S. CERCLA REPORTABLE QUANTITIES (RQ):** Not applicable.

**U.S. TSCA INVENTORY STATUS:** This product is regulated by the Food and Drug Administration; it is not subject to requirements under TSCA.

**CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65):** The components of this product are not on the California Proposition 65 lists.

**ANSI LABELING (Based on 129.1, Provided to Summarize Occupational Exposure Hazards):** CAUTION! MAY CAUSE ALLERGIC REACTION. MAY CAUSE SKIN AND EYE IRRITATION. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Wear gloves, goggles, and appropriate body protection during handling or administration. **FIRST-AID:** In case of contact, flush skin or eyes with plenty of water. If adverse respiratory reaction occurs from allergic reaction, give oxygen and seek immediate medical attention. If ingested, DO NOT induce vomiting—seek immediate medical attention. **IN CASE OF FIRE:** Use water fog, dry chemical, CO<sub>2</sub>, or “alcohol” foam. **IN CASE OF SPILL:** Wipe up spilled product. Place residual in appropriate container and seal. Dispose of according to applicable regulations. Consult Material Safety Data Sheet for additional information.

### CANADIAN REGULATIONS:

**CANADIAN DSL/NDSL INVENTORY STATUS:** This product regulated by the Therapeutic Products Programme (TPP) of Health Canada and so it is exempt from requirements of the DSL/NDSL Inventory.

**CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) PRIORITIES SUBSTANCES LISTS:** The components of this product are not on the CEPA Priorities Substances Lists.

**OTHER CANADIAN REGULATIONS:** Not applicable.

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## SECTION 16: OTHER INFORMATION

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PREPARATION INFORMATION: Created August 18, 2012

**DISCLAIMER:** This Material Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR, 1910.1200. Other government regulations must be reviewed for applicability to this product. To the best of GlycoMyr, Inc.'s knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are not guaranteed and no warranties of any type, either express or implied, are provided. The information contained herein relates only to this specific product. If this product is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.