

## SECTION 1: Identification of the substance/mixture and of the company

### 1.1 Product identifier

- Product Name(s): **Natural E-AD**
- Product Part Number(s): **09063**
- Brand(s): Neogen®Vet

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

- Use of the substance/preparation: An injectable sterile solution of vitamins for use in domestic animals.
- Uses advised against: For animal use only. Not for human use.

### 1.3 Details of the supplier of the safety data sheet

- Name of Manufacturer: Sparhawk Laboratories, Inc. for Neogen Corporation
- Address of Manufacturer: 944 Nandino Blvd.  
Lexington, Kentucky 40511  
USA
- Telephone: 859/254-1221 • 800/525-2022
- Email: [Inform@neogen.com](mailto:Inform@neogen.com)

### 1.4 Emergency telephone number

- Emergency Telephone: Chemtrec: 1 (800) 424-9300  
Outside USA and Canada: +1 (703) 527-3887

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## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Classification (29 CFR 1910.1200)

- Skin irritation, Cat. 2, H315, Eye irritation, Cat. 2A, H319, Specific target organ toxicity (single exposure), Cat. 3, H335, Toxic to reproduction, Cat. 1B, H360

Classification (WHMIS 2015 HPR)

- Skin irritation, Cat. 2, H315, Eye irritation, Cat. 2A, H319, Specific target organ toxicity (single exposure), Cat. 3, H335, Toxic to reproduction, Cat. 1B, H360

Additional information: For full text of Hazard statements: see Section 16

### 2.2 Label elements



GHS07



GHS08

- Signal Word: **Danger**
- Symbols: GHS07, GHS08
- Hazard phrases
  - Causes skin irritation.
  - Causes serious eye irritation.
  - May cause respiratory irritation.
  - May damage fertility or the unborn child.
- Precautionary Phrases
  - Wash hands thoroughly after handling.
  - Obtain special instruction before use.
  - Do not handle until all safety precautions have been read and understood.
  - Wear protective gloves/protective clothing/eye protection/face protection.
  - Avoid breathing dust.
  - Use only outdoors or in a well-ventilated area.
  - If on skin: Wash with plenty of soap and water.
  - If skin irritation occurs: Get medical advice/attention.
  - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - If eye irritation persists: Get medical advice/attention.
  - If inhaled: If breathing is difficult remove person to fresh air and keep comfortable for breathing.

## SECTION 2: Hazards identification (continued)

Take off contaminated clothing and wash it before reuse.  
 If exposed or concerned: Get medical advice/attention.  
 Store in a well-ventilated place. Keep container tightly closed.  
 Store locked up.  
 Dispose of contents/container in accordance with local/regional/national/international regulations.

### 2.3 Other hazards

- Keep out of reach of children.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

### 3.2 Mixtures

This product is a mixture of the substances listed below with the addition of non-hazardous materials

Chemical	Concentration	CAS No.	H-Statements	Symbols
N-methyl-2-pyrrolidone	20.00%	872-50-4	H315, H319, H335, H360	GHS07, GHS08
Benzyl alcohol	2.00%	100-21-6	H302, H332	GHS07
d-alpha-Tocopherol	30.00%	59-02-9	None	None
Ethox CO-30	15.00%	9038-23-7	None	None
Polysorbate 80	15.00%	9005-65-6	None	None
Vitamin A propionate	4.00%	7069-42-3	H360	GHS08
Vitamin D3	0.03%	67-97-0	H301, H310, H330, H372	GHS06, GHS08
Neobee M-20	q.s.	68583-51-7	None	None

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

- For full text of Hazard statements: see Section 16.

## SECTION 4 First aid measures

### 4.1 Description of first aid measures

- General
  - In case of doubt, or when symptoms persist, seek medical attention.
  - If used as directed, this product is not hazardous to humans or animals, but like any other chemical, it should be treated with care, respect, and common sense.
- Contact with skin
  - Causes skin irritation.
  - Remove contaminated clothing.
  - Rinse affected area with plenty of water.
  - If skin irritation or rash occurs: Get medical advice/attention.
  - Contaminated clothing should be laundered before reuse.
- Contact with eyes
  - Causes serious eye irritation.
  - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - If eye irritation persists: Get medical advice/attention.
- Ingestion
  - Rinse mouth with water (do not swallow).
  - Never make an unconscious person vomit or drink fluids.
  - If medical advice is needed, have product container or label at hand.
- Inhalation
  - May cause respiratory irritation.
  - If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
  - Call a poison center or doctor/physician if you feel unwell.

### 4.2 Most important symptoms and effects, both acute and delayed

- The most important known symptoms are described in the labeling (see Section 2.2) and/or in Section 11.

### 4.3 Indication of any immediate medical attention and special treatment needed

- Treat symptomatically.

## SECTION 5: Fire-fighting measures

- 5.1 Extinguishing media
- In case of fire: use water spray, foam, carbon dioxide or dry agent for extinction.
- 5.2 Special hazards arising from the substance or mixture
- Smoke from fires is toxic. Take precautions to protect personnel from exposure.
  - See Section 10.
- 5.3 Advice for firefighters
- Keep container(s) exposed to fire cool, by spraying with water.
  - Wear chemical protection suit and positive-pressure breathing apparatus, if necessary.
  - Wear protective clothing as per Section 8.
- 5.4 Hazardous Combustion Products
- May include carbon oxides.
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## SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures
- Spills should be cleaned up immediately to avoid slip and fall accidents and injuries.
  - Wear protective clothing as per Section 8.
  - Evacuate personnel not directly involved in spill clean-up.
  - Shut off source of leak/release, if safe to do so.
  - Shut down and/or remove equipment in spill area, if safe to do so.
  - Wash thoroughly after dealing with spillage.
- 6.2 Environmental Precautions
- Do not allow to enter public sewers and watercourses.
  - Avoid releasing to the environment.
- 6.3 Methods and material for containment and cleaning up
- Absorb spillage in inert material and shovel up.
  - Dike large spills as necessary.
  - Place in sealable containers and label them.
  - Ventilate the area and wash spill site after material pick-up is complete.
  - Dispose of contaminated materials, rinsates, and wastes in accordance with local/national/international regulations.
- 6.4 Reference to other sections
- See Section 7 for storage. For disposal, see Section 13.
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## SECTION 7: Handling and storage

- 7.1 Precautions for safe handling
- Do not breathe mist/vapors/fumes/spray.
  - Avoid contact with skin and eyes.
  - Do not eat, drink, smoke, or apply cosmetics when using this product.
  - Ensure adequate ventilation.
  - Eyewash bottles should be available.
  - Wash hands thoroughly after using this substance.
- 7.2 Conditions for safe storage, including any incompatibilities
- Store in a dark place at temperatures between 15-30°C (59-86°F).
  - Protect from light and excessive heat (104°F).
  - Keep lid tightly closed when not in use.
  - Keep out of reach of children.
- 7.3 Specific end use(s)
- An injectable sterile solution of vitamins for use in domestic animals.
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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Components with workplace control parameters

Component	CAS No.	Value	Control Parameters	Basis
Benzyl alcohol	100-51-6	TWA	10 ppm	USA. Workplace Environmental Exposure Levels (WEEL)

Component	CAS No.	Value	Control Parameters	Basis
N-methyl-2-pyrrolidone	872-50-4	TWA	10 ppm	USA. Workplace Environmental Exposure Levels (WEEL)

Biological occupational exposure limits

Component	CAS No.	Value	Control Parameters	Basis
N-methyl-2-pyrrolidone	872-50-4	TWA	10 ppm	USA. Workplace Environmental Exposure Levels (WEEL)
Remarks:		End of shift (As soon as possible after exposure ceases)		

Derived No Effect Level (DNEL): N-methyl-2-pyrrolidone, CAS No. 872-50-4

Application area	Exposure routes	Health effect	Value
Workers	Skin contact	Acute systemic effects	208 mg/kg BW/d
Workers	Inhalation	Acute systemic effects	80 mg/m <sup>3</sup>
Workers	Skin contact	Chronic systemic effects	19.8 mg/kg BW/d
Workers	Inhalation	Chronic systemic effects	40 mg/m <sup>3</sup>

Predicted No Effect Concentration (PNEC): N-methyl-2-pyrrolidone, CAS No. 872-50-4

Compartment	Value
Water	5 mg/L
Soil	0.138 mg/kg
Marine Water	0.025 mg/kg
Fresh water	0.25 mg/L
Fresh water sediment	0.805 mg/kg
Onsite sewage treatment plant	10 mg/L

### 8.2 Exposure controls

- Eyewash bottles should be available.
- No respiratory protection is needed if ventilation/extraction is adequate, otherwise wear approved respiratory protection.
- Wear protective gloves to prevent prolonged or repeated skin contact.
- Wear safety glasses approved to standard for ANSI Z87, according to the concentration and amount of dangerous substance at the specific workplace.
- Wear suitable protective clothing in accordance with good industrial hygiene and safety practices in the event of prolonged exposure to bulk quantities.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- Appearance: Clear, orange/brown oily liquid
- Odor: No information available
- pH: No information available
- Melting Point/Range: No information available
- Boiling Point/Range: No information available
- Flashpoint: No information available
- Evaporation Rate: Not information available
- Flammability: No information available
- Vapor Pressure: No information available
- Vapor Density: No information available
- Specific Gravity: 0.97
- Solubility in water: Dispersible in water
- Partition Coefficient (n-Octanol/Water): No information available
- Autoignition Temperature: Product is not self-igniting
- Viscosity: No information available

## SECTION 9: Physical and chemical properties (continued)

- Explosive Properties: Product does not present an explosion hazard
- Oxidizing Properties: Product is not classified as an oxidizer.

### 9.2 Other information

- No information available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

- No information available

### 10.2 Chemical stability

- Considered stable under normal conditions.

### 10.3 Possibility of hazardous reactions

- No hazardous reactions known if used for its intended purpose.

### 10.4 Conditions to avoid

- None known

### 10.5 Incompatible materials

- None known

### 10.6 Hazardous Decomposition Products

- May include carbon oxides.

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

- No experimental test data available for mixture
- ATEmix = Not determined
- Contact with skin  
Causes skin irritation.
- Contact with eyes  
Causes serious eye irritation.
- Ingestion  
May cause gastrointestinal symptoms if swallowed.
- Inhalation  
May cause respiratory irritation.
- Carcinogenicity  
Not listed in the National Toxicology Program (NTP) 13<sup>th</sup> Report on Carcinogens.  
Not found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs, Volumes 1-112.  
Not listed in OSHA standard 1910.1003 Carcinogens.
- Mutagenicity  
May cause damage to fertility or the unborn child.
- Teratogenicity  
May cause damage to fertility or the unborn child.

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## SECTION 12: Ecological information

### 12.1 Toxicity

#### Benzyl alcohol

##### Toxicity to fish

LC<sub>50</sub> – Lepomis macrochirus (Bluegill) = 10 mg/L-96h

LC<sub>50</sub> – Pimephales promelas (Fathead minnow) = 460 mg/L-96h

##### Toxicity to daphnia and other aquatic invertebrates

EC<sub>50</sub> – Daphnia magna (Water flea) = 55 mg/L-24h

EC<sub>50</sub> – Daphnia magna (Water flea) = 230 mg/L-48h

## SECTION 12: Ecological information (continued)

### N-methyl-2-pyrrolidone

#### Toxicity to fish

LC<sub>50</sub> – Leuciscus idus (Golden orfe) > 500 mg/L-96h

#### Toxicity to daphnia and other aquatic invertebrates

EC<sub>50</sub> – Daphnia magna (Water flea) > 1000 mg/L-48h

#### Toxicity to bacteria

LC<sub>50</sub> – Bacteria > 9000 mg/L

### 12.2 Persistence and degradability

#### Benzyl alcohol

##### Biodegradability

Biotic/Aerobic – Exposure time 28d

Result: 92-96% (Readily biodegradable)

Aerobic biochemical oxygen demand – Exposure time 7d

Result: 92-96% (Readily biodegradable)

(OECD Test Guideline 301C)

### N-methyl-2-pyrrolidone

##### Biodegradability

Result: 90% (Readily biodegradable)

### 12.3 Bioaccumulation Potential

- No information available

### 12.4 Mobility in soil

- No information available

### 12.5 Other Adverse Effects

- To the best of our knowledge, the properties of this material have not been fully evaluated.

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

- Disposal should be in accordance with local, state, national, or international regulations.
- Do not discharge into drains or the environment, dispose to an approved waste disposal facility.
- Do not reuse empty containers.

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## SECTION 14: Transport information

### 14.1 UN Number

- Not classified as hazardous for international transport

### 14.2 UN Proper Shipping Name

- Not applicable

### 14.3 Transport hazard class(es)

- Not applicable

### 14.4 Packing group

- Not applicable

### 14.5 Environmental hazards

- Not classified

### 14.6 Special precautions for user

- Not classified

### 14.7 Domestic Surface Transport (US DOT)

- Proper Shipping Name: Combustible liquid, n.o.s. (N-methyl-2-pyrrolidone mixture)
- DOT UN No.: NA1993
- DOT Hazard Class: Not applicable
- DOT Packing Group: III

**SECTION 14: Transport information (continued)**

## 14.8 International Road/Rail (ADR/RID)

- Proper Shipping Name: Not applicable
- ADR UN No.: Not applicable
- ADR Hazard Class: Not applicable
- ADR Packing Group: Not applicable
- Tunnel Code: Not applicable

## 14.9 Ocean/Sea (IMO/IMDG)

- Proper Shipping Name: Not applicable
- IMDG UN No.: Not applicable
- IMDG Hazard Class: Not applicable
- IMDG Packing Group: Not applicable

## 14.10 Air (ICAO/IATA)

- Proper Shipping Name: Not applicable
- ICAO UN No.: Not applicable
- ICAO Hazard Class: Not applicable
- ICAO Packing Group: Not applicable

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**SECTION 15: Regulatory information**

## 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

The labeling requirements of the Federal Food, Drug, and Cosmetic Act differ from the classification criteria and hazard information required for safety data sheets and for workplace labels under the OSHA Hazard Communication Standard 29 CFR 1910.1200. Following is the hazard information as required on the drug label:

KEEP OUT OF REACH OF CHILDREN  
FOR ANIMAL USE ONLY  
NOT FOR HUMAN USE

- NDC: 59051-9063-6

## 15.2 United States Regulatory Information

SARA 302 Components

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

SARA 313 Components

The 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.

SARA 311/312

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

Toxic Substance Control Act (TSCA)

This product is exempt from TSCA under Section 3(2)(B)(vi) when used for pharmaceutical application.

State Right-to-Know

## Massachusetts

N-methyl-2-pyrrolidone, CAS No. 872-50-4  
Benzyl alcohol, CAS No. 100-51-6

## New Jersey

N-methyl-2-pyrrolidone, CAS No. 872-50-4

## Pennsylvania

N-methyl-2-pyrrolidone, CAS No. 872-50-4  
Benzyl alcohol, CAS No. 100-51-6

California Prop 65

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

**SECTION 15: Regulatory information (continued)**

## 15.3 Canadian Regulatory Information

- This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR). The labelling may differ subject to the requirements of the Food and Drugs Act (FDA).
- WHMIS Classification: Exempt
- Inventory Status
  - Domestic Substances List (DSL)                      Listed
  - Non-Domestic Substances List (NDSL)              Not listed

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**SECTION 16: Other information**

Document Number: SDS-9028, Natural E-AD

Date of Preparation: June 22, 2016

Revision: Rev. 0

Replaces: New issue

Text not given with phrase codes where they are used elsewhere in this safety data sheet: H301: Toxic if swallowed. H302: Harmful if swallowed. H310: Fatal in contact with skin. H315: Causes skin irritation. H319: Causes serious eye irritation. H330: Fatal if inhaled. H332: Harmful if inhaled. H335: May cause respiratory irritation. H360: May damage fertility or the unborn child. H372: Causes damage to organs through prolonged or repeated exposure.

This document is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. Neogen Corporation shall not be held liable for any damage resulting from handling or from contact with the above product. These suggestions should not be confused with state, municipal or insurance requirements, and constitute NO WARRANTY.