
Section 1 - PRODUCT AND COMPANY IDENTIFICATION

Material Name

EnMax® Sow Premix, Product Code: 5512

Product Use

Livestock Feed Premix.

Restrictions on Use

Use Only as Directed on Label. This product is for further manufacturing of feeds.

Details of the supplier of the safety data sheet

Ralco Nutrition, Inc.
1600 Hahn Road
Marshall, MN 56258
Phone: 1-800-533-5306

Section 2 - HAZARDS IDENTIFICATION

Classification in accordance with paragraph (d) of 29 CFR 1910.1200.

Acute Toxicity - Inhalation - Dust/Mist - Category 3

Serious Eye Damage/Eye Irritation - Category 2A

Skin Sensitization - Category 1A

Germ Cell Mutagenicity - Category 2

Reproductive Toxicity - Category 2

Specific Target Organ Toxicity - Single Exposure - Category 1 (body, respiratory system, systemic toxicity)

Specific Target Organ Toxicity - Repeated Exposure - Category 1 (lungs)

Specific Target Organ Toxicity - Repeated Exposure - Category 2 Oral (blood,Hematopoietic System)

Hazardous to the Aquatic Environment - Acute - Category 2

Hazardous to the Aquatic Environment - Chronic - Category 2

GHS Label Elements**Symbol(s)****Signal Word**

Danger.

Hazard Statement(s)

Toxic if inhaled.
Causes serious eye irritation.
May cause allergic skin reaction.
Suspected of causing genetic defects.
Suspected of damaging fertility or the unborn child.
Causes damage to organs.
Causes damage to organs through prolonged or repeated exposure.
Toxic to aquatic life with long lasting effects.

Precautionary Statement(s)**Prevention**

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Use only outdoors or in a well-ventilated area.
Wear eye protection/face protection.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Do not eat, drink or smoke when using this product.
Avoid release to the environment.
Wear protective gloves.

Response

Collect spillage
If exposed: Call a POISON CENTER or doctor/physician.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
Call a POISON CENTER or doctor.
Specific treatment (see label).

Storage

Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS	Component Name	Percent
1318-02-1	Zeolite	30-60
657-27-2	L-Lysine hydrochloride	10-30
471-34-1	Calcium Carbonate	< 3

Section 4 - FIRST AID MEASURES

Inhalation

If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

Skin

After contact with skin, wash immediately with plenty of water and soap. If skin irritation or rash occurs: Get medical advice/attention.

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 thoroughly with water.

Most Important Symptoms/Effects**Acute**

Causes serious eye irritation. May cause allergic skin reaction. Causes damage to organs.

Delayed

Suspected of causing genetic defects. Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure.

Note to Physicians

Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

Extinguishing Media**Suitable Extinguishing Media**

Water spray, regular dry chemical, carbon dioxide, fire-fighting foam.

Unsuitable Extinguishing Media

None Known.

Fire Fighting Measures

Co-ordinate fire-fighting measures to the fire surroundings.

Special Protective Equipment and Precautions for Firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Avoid contact with eyes and skin. Use personal protective equipment as required.

Methods and Materials for Containment and Cleaning Up

Collect in closed and suitable containers for disposal. Dispose of contents/container in accordance with local/regional/national/international regulations.

Environmental Precautions

Do not allow to enter into surface water or drains.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling

Use suitable eye protection. Wear personal protective equipment/face protection. Do not breathe dust/fume/gas/mist/vapours/spray. Provide adequate ventilation. Wash thoroughly after handling. Wash contaminated clothing before reuse.

Conditions for Safe Storage, Including any Incompatibilities

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Store in a dry place. Store in a closed container. Store in a well-ventilated place. Keep cool.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Component Exposure Limits

Zinc oxide	1314-13-2
ACGIH:	2 mg/m ³ TWA respirable fraction
	10 mg/m ³ STEL respirable fraction
NIOSH:	5 mg/m ³ TWA dust and fume
	10 mg/m ³ STEL fume
	15 mg/m ³ Ceiling dust
	500 mg/m ³ IDLH

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OSHA (US):	5 mg/m3 TWA fume; 15 mg/m3 TWA total dust; 5 mg/m3 TWA respirable fraction
Mexico:	5 mg/m3 TWA LMPE-PPT fume; 10 mg/m3 TWA LMPE-PPT dust
	10 mg/m3 STEL [LMPE-CT] fume
Calcium Carbonate	471-34-1
NIOSH:	10 mg/m3 TWA total dust; 5 mg/m3 TWA respirable dust
Selenium	7782-49-2
ACGIH:	0.2 mg/m3 TWA
NIOSH:	0.2 mg/m3 TWA
	1 mg/m3 IDLH

EU - Occupational Exposure (98/24/EC) - Binding Biological Limit Values and Health Surveillance Measures

There are no biological limit values for any of this product's components.

Engineering Controls

Sufficient to maintain atmospheric concentrations below applicable regulatory limits.

Individual Protection Measures, such as Personal Protective Equipment

Eye/face protection

Eye glasses with side protection, goggles.

Skin Protection

Wear suitable protective clothing.

Respiratory Protection

In case of inadequate ventilation wear respiratory protection.

Glove Recommendations

Wear protective gloves.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Powder	Physical State	solid
Odor	odorless	Color	Tan
Odor Threshold	Not available	pH	Not available
Melting Point	Not available	Boiling Point	Not available
Freezing point	Not available	Evaporation Rate	Not available
Boiling Point Range	Not available	Flammability (solid, gas)	Not available
Autoignition	Not available	Flash Point	Not available
Lower Explosive Limit	Not available	Decomposition	Not available
Upper Explosive Limit	Not available	Vapor Pressure	Not available
Vapor Density (air=1)	Not available	Specific Gravity (water=1)	Not available
Water Solubility	Not available	Partition coefficient: n-octanol/water	Not available
Viscosity	Not available	Solubility (Other)	Not available
Density	Not available	Molecular Weight	Not available

Section 10 - STABILITY AND REACTIVITY

Reactivity

No known hazardous reactions.

Chemical Stability

The product is stable under storage at normal ambient temperatures.

Conditions to Avoid

Avoid contact with incompatible materials.

Incompatible Materials

None Known.

Hazardous decomposition products

None Known.

Section 11 - TOXICOLOGICAL INFORMATION

Acute and Chronic Toxicity**Component Analysis - LD50/LC50**

The components of this material have been reviewed in various sources and the following selected endpoints are published:

Zeolite (1318-02-1)

Oral LD50 Rat 5000 mg/kg

Dermal LD50 Rabbit >2000 mg/kg

Inhalation LC50 Rat 2.4 mg/L 1 h

L-Lysine hydrochloride (657-27-2)

Oral LD50 Rat 10 g/kg

Zinc oxide (1314-13-2)

Oral LD50 Rat >5000 mg/kg

Copper chloride, basic (1332-40-7)

Oral LD50 Rat 833 mg/kg

Dermal LD50 Rat >5000 mg/kg

Zinc sulfate, monohydrate (7446-19-7)

Oral LD50 Mouse 1891 mg/kg

FERROUS SULFATE (7720-78-7)

Oral LD50 Rat 319 mg/kg

White mineral oil (8042-47-5)

Oral LD50 Rat >5000 mg/kg

Vitamin A acetate (127-47-9)

Oral LD50 Rat 4980 mg/kg

CALCIUM CARBONATE (471-34-1)

Oral LD50 Rat 6450 mg/kg

Thiamine mononitrate (58-56-0)

Oral LD50 Rat 4000 mg/kg

Cholecalciferol (67-97-0)

Oral LD50 Rat 42 mg/kg

Riboflavin (83-88-5)

Oral LD50 Rat >10 g/kg

Nicotinamide (98-92-0)

Oral LD50 Rat 3500 mg/kg

Dermal LD50 Rabbit >2000 mg/kg

Selenium (7782-49-2)

Oral LD50 Rat 6700 mg/kg

Immediate Effects

No information on significant adverse effects.

Delayed Effects

No information on significant adverse effects.

Irritation/Corrosivity Data

No data available.

Respiratory Sensitization

No data available.

Dermal Sensitization

No data available.

Component Carcinogenicity

Zeolite	1318-02-1
IARC:	Monograph 68 [1997] (other than erionite clinoptilolite phillipsite mordenite non-fibrous Japanese zeolite synthetic zeolites) (Group 3 (not classifiable))
Selenium	7782-49-2
IARC:	Supplement 7 [1987]; Monograph 9 [1975] (Group 3 (not classifiable))
DFG:	Category 3B (could be carcinogenic for man)

Germ Cell Mutagenicity

No data available.

Tumorigenic Data

No data available.

Reproductive Toxicity

No data available.

Specific Target Organ Toxicity - Single Exposure

No data available.

Specific Target Organ Toxicity - Repeated Exposure

No data available.

Aspiration hazard

No data available.

Medical Conditions Aggravated by Exposure

No data available.

Section 12 - ECOLOGICAL INFORMATION
Component Analysis - Aquatic Toxicity

Zeolite	1318-02-1
Fish:	LC50 96 h Brachydanio rerio 1800 mg/L [semi-static]; LC50 96 h Oryzias latipes 3200 - 5600 mg/L [semi-static]; LC50 96 h Poecilia reticulata 1800 - 3200 mg/L [semi-static]
Algae:	EC50 96 h Desmodesmus subspicatus 18 mg/L IUCLID
Invertebrate:	EC50 48 h Daphnia magna 1000 - 1800 mg/L IUCLID
Ferrous Sulfate	7720-78-7

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Fish:	LC50 96 h Poecilia reticulata 925 mg/L [static]; LC50 96 h Cyprinus carpio 0.56 mg/L [semi-static]
Invertebrate:	EC50 48 h Daphnia magna 152 mg/L IUCLID; EC50 48 h Daphnia magna 6.15 - 9.26 mg/L [static] EPA
White mineral oil	8042-47-5
Fish:	LC50 96 h Lepomis macrochirus >10000 mg/L
Nicotinamide	98-92-0
Fish:	LC50 96 h Poecilia reticulata >1000 mg/L [static]

Section 13 - DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 14 - TRANSPORT INFORMATION

US DOT Information:

No Classification assigned.

TDG Information:

No Classification assigned.

Section 15 - REGULATORY INFORMATION

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Ferrous Sulfate	7720-78-7
CERCLA:	1000 lb final RQ; 454 kg final RQ
Selenium	7782-49-2
SARA 313:	1 % de minimis concentration

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CERCLA:	100 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm); 45.4 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm)
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U.S. State Regulations

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Zinc oxide	1314-13-2	Yes	Yes	Yes	Yes	Yes
Ferrous Sulfate	7720-78-7	Yes	Yes	No	Yes	Yes
Selenium	7782-49-2	Yes	Yes	No	Yes	Yes

Not listed under California Proposition 65
Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which meet WHMIS criteria specified in the Controlled Products Regulations and are present above the threshold limits listed on the IDL.

Zinc oxide	1314-13-2
	1 %
Ferrous Sulfate	7720-78-7
	1 %
Selenium	7782-49-2
	0.1 %

Component Analysis - Inventory
Zeolite (1318-02-1)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
No	No	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	No

L-Lysine hydrochloride (657-27-2)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Calcium Carbonate (471-34-1)

US	CA	EU	AU	PH	JP - ENCS	JP - ISHL	KR - KECI/KECL	KR - TCCA	CN	NZ	MX
Yes	DSL	EIN	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes

Section 16 - OTHER INFORMATION

Summary of Changes

New SDS: 10/30/2015

Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CLP - Classification, Labelling, and Packaging; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSD - Dangerous Substance Directive; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LLV - Level Limit Value; LOLI - List Of Lists™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; REACH- Registration, Evaluation, Authorisation, and restriction of Chemicals; RID - European Rail Transport; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States.

Other Information
Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of Ralco's knowledge, information and belief at the date of preparation. The information provided is designed only as guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The conditions or methods of said handling, storage, use, and disposal of this product are beyond our control. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expenses arising out of or connected with the handling, storage, use, or disposal of this product. The information provided 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 text.