



SAFETY DATA SHEET

Original Preparation Date: 29-Jul-2015

Revision Date: 29-Jul-2015

Revision Number: 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product Name:

PX TM SHB 2013 BG

Product Code:

KM2784

Use of the Substance / Preparation:

Pet Food Ingredient.

Contact Manufacturer:

ADM Alliance Nutrition, Inc.

1000 North 30th St.

Quincy, IL 62301

United States

Tel. (+1) 217-222-7100 (business hours)

Emergency response telephone number:

Chemtrec 1-800-424-9300 (CCN 1635)

2. HAZARDS IDENTIFICATION

Emergency Overview

Warning. Causes serious eye damage.

Appearance

Tan

Physical State

Solid

Odor

No information available

Classification according to 29 CFR 1910, amended to conform to the United Nations' Globally Harmonized System of Classification and Labelling of Chemicals (GHS):

Serious Eye Damage / Eye Irritation Category 1 Category 2

OSHA / GHS Label Elements

GHS Hazard Pictogram(s):



Signal Word:

Danger

Hazard Statement(s):

H318 Causes serious eye damage

Prevention Precautionary Statements:

Wear eye/face protection.

Response Precautionary Statements:

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a doctor/physician.

Up to 13.4 % of the mixture consists of ingredient(s) of unknown acute oral toxicity.

Up to 13.4 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity.

Up to 100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature of the preparation Mixture.

The following component(s) are considered hazardous in accordance with paragraph (d) of 29 CFR 1910.1200 [OSHA]

Chemical Name	CAS-No	Weight %	OSHA HAZARD INDICATOR
Zinc sulfate monohydrate	7446-19-7	3% < x < 5%	Eye Dam. 1. Acute Tox. 4. (oral)
Ferrous sulfate	7720-78-7	3% < x < 5%	Skin Irrit. 2. Eye Irrit. 2. Acute Tox. 4. (oral)

Where a single SDS is used for similar mixtures or in cases of a batch-to-batch variability, OSHA guidance allows for the use of concentration ranges. [Directive: CPL 02-02-079]

Contains additional ingredients that are non-hazardous or are below levels that would contribute to a health hazard potential.

4. FIRST AID MEASURES

Description of first aid measures

Eye Contact Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first five minutes, then continue rinsing eye.

Skin Contact Wash off with warm water and soap.

Inhalation Move to fresh air.

Ingestion Clean mouth with water and afterwards drink plenty of water. If ingested in large amounts, seek medical attention.

General Advice When symptoms persist or in all cases of doubt seek medical advice.

Most important symptoms and affects, both acute and delayed

Eyes Risk of serious damage to eyes.

Skin May cause slight skin irritation.

Inhalation Dust may cause irritation of respiratory tract.

Ingestion Health injuries are not known or expected under normal use. The product is not expected to produce ill effects when blended into pet food in the recommended quantities. Ingestion of zinc sulfate in significant amounts may result in burning pain in mouth and throat, fever, nausea, abdominal pain, vomiting, diarrhea, prostration, tenemus, retching, hyperglycemia, anuria, liver damage, kidney damage with albuminuria, acetonuria, and glycosuria, hypertension, collapse, and convulsion.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Special forms of treatment and immediate medical attention are not specified. Treat Symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable Properties

Based on composition, the material is not expected to present a flammability hazard.

Extinguishing media

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media None known.

Special hazards arising from the substance or mixture

Hazardous Combustion Products Oxides of zinc, Sulphur oxides, Hydrogen chloride, Compounds of chlorine, Chlorine, Potassium oxides.

Specific Hazards Arising from the Chemical Risk of serious damage to eyes.

Sensitivity to mechanical impact No information available.

Sensitivity to static discharge No information available.

Advice for fire-fighters

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

Health 3
Flammability 0

Stability and Reactivity 0
Physical hazard -



6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Ensure adequate ventilation. Use appropriate personal protective equipment. Avoid contact with the skin and the eyes.

Environmental Precautions

Prevent further leakage or spillage if safe to do so.

Methods and Materials for Containment and Cleaning Up

Clean up promptly by sweeping or vacuum.

7. HANDLING AND STORAGE

Handling

Avoid dust formation in confined areas. Ensure adequate ventilation. Avoid contact with skin and eyes.

Storage

Store in a cool, dry, hygienic situation, whether in bulk silos, tote bags or paper sacks. Keep containers dry and tightly closed to avoid moisture absorption and contamination.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits

Where exposure limits have not been established for specific components of this material, please observe the OSHA and ACGIH established limits for particulates not otherwise classified (PNOC). OSHA PEL: [15 mg/m³ (total dust) 8-hr TWA], [5 mg/m³ (respirable) 8-hr TWA]. ACGIH TLV: [10 mg/m³ (inhalable) 8-hr TWA], [3 mg/m³ (respirable) 8-hr TWA]. The following constituents are the only significant constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents of significant concentration have no known exposure limits.

Chemical Name	Weight %	ACGIH TLV	OSHA PEL	NIOSH
Ferrous sulfate	3% < x < 5%	TWA: 1 mg/m ³ Fe		TWA: 1 mg/m ³ Fe

Appropriate Engineering Controls

Ensure adequate ventilation, especially in confined areas. Apply technical measures to comply with the occupational exposure limits. However it is the duty of the user to verify this and follow given exposure limits at the workplace. Ensure that eyewash stations and safety showers are close to the workstation location.

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice.

Personal Protective Equipment

Eye/face Protection.

Tightly fitting safety goggles.

Skin and Body Protection

Protective clothing and gloves may be worn to reduce the potential of mechanical irritation. If exposed to airborne dust, use appropriate NIOSH approved (or equivalent) respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Appropriate respiratory protection should be selected by a qualified person and should be based upon a risk assessment of the work activities and exposure levels.

Respiratory Protection



9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Tan
Physical State	Solid
Odor	No information available
Odor Threshold	No information available
pH	No information available
Flash Point	Not applicable
Autoignition Temperature	No information available
Boiling point	Not applicable
Melting/Freezing Point	No information available

Decomposition temperature	No information available
Oxidizing Properties	No information available
Flammability Limits in Air	No information available
Solubility(ies)	No information available
Evaporation Rate	Not applicable
Vapor Pressure	Not applicable
Vapor Density	Not applicable
Relative Density	No information available
Viscosity (kinematic)	No information available
Partition Coefficient (n-octanol/water)	No information available

10. STABILITY AND REACTIVITY

Reactivity Stable under recommended use and storage conditions.

Stability Stable under normal conditions.

Possibility of Hazardous Reactions None under normal processing.

Conditions to Avoid None known.

Incompatible Materials No materials to be especially mentioned.

Hazardous Decomposition Products Hydrogen chloride, Chlorine, Compounds of chlorine, Potassium oxides.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity	Based on available data, no evidence of acute toxicity. (Classification is based on available literature data for the significant mixture components). The product is not expected to produce ill effects when blended into pet food in the recommended quantities. LD50 oral acute toxicity estimate for the mixture is > 2000 mg/kg. LD50 dermal acute toxicity estimate for the mixture is > 2000 mg/kg.
Skin corrosion/irritation	Based on available data, not, or only slightly irritating. (Classification is based on available literature data for the significant mixture components).
Serious eye damage/eye irritation	Eye Dam. Cat. 1: Causes serious eye damage. (Classification is based on available literature data for the significant mixture components).
Respiratory or skin sensitisation	Not expected to be a skin or respiratory sensitizer. (Classification is based on available literature data for the significant mixture components).
Germ cell mutagenicity	Not classified. Not expected to be mutagenic. None of the significant input ingredients of this mixture have been identified as being mutagenic.
Carcinogenicity	Based on available data, no evidence of carcinogenicity. No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen.
Reproductive toxicity	Not classified. Not expected to be toxic to reproduction. Reproductive effects have been reported in animals for zinc sulfate (anhydrous). Data is inconclusive for classification purposes.
STOT - single exposure	Not classified. No evidence of toxicity. None of the significant input ingredients of this mixture have been identified as a STOT SE hazard.
STOT - repeated exposure	Not classified. No evidence of toxicity. None of the significant input ingredients of this mixture have been identified as a STOT RE hazard.
Aspiration hazard	Based on available data, no known aspiration hazard. (Classification is based on available literature data for the significant mixture components).

Potential health effects

Eyes	Risk of serious damage to eyes.
Skin	May cause slight skin irritation.
Inhalation	Dust may cause irritation of respiratory tract.

Ingestion

Health injuries are not known or expected under normal use. The product is not expected to produce ill effects when blended into pet food in the recommended quantities. Ingestion of zinc sulfate in significant amounts may result in burning pain in mouth and throat, fever, nausea, abdominal pain, vomiting, diarrhea, prostration, tenemus, retching, hyperglycemia, anuria, liver damage, kidney damage with albuminuria, acetonuria, and glycosuria, hypertension, collapse, and convulsion.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Not classified for aquatic toxicity. This product has not been evaluated for eco-toxicological effects. Component-level values are listed below.

Chemical Name	Weight %	Fresh Water Algae	Acute Fish Toxicity	Daphnia (Water flea)
Potassium Chloride	60% < x < 70%	EC50: 72h 2500 mg/L (Desmodesmus subspicatus)	LC50: 96h 750-1020mg/L (Pimephales promelas) static LC50: 96h 1060mg/L (Lepomis macrochirus) static	EC50: 48h 825 mg/L (Daphnia magna) EC50: 48h 83 mg/L (Daphnia magna)
Zinc sulfate monohydrate	3% < x < 5%	EC50: 72h 0.056 mg/L (Pseudokirchneriella subcapitata) EC50: 96h 2.4 mg/L (Chlorella vulgaris) EC50: 72h 64.8 mg/L (Chlorella vulgaris)		EC50: 48h 0.538 - 0.908 mg/L (Daphnia magna) EC50: 48h 0.75 mg/L (Daphnia magna)
Ferrous sulfate	3% < x < 5%		LC50: 96h 0.56mg/L (Cyprinus carpio) semi-static LC50: 96h 925mg/L (Poecilia reticulata) static	EC50: 48h 6.15 - 9.26 mg/L (Daphnia magna) EC50: 48h 152 mg/L (Daphnia magna)
Sodium chloride (NaCl)	1% < x < 3%		LC50: 96h 4747-7824mg/L (Oncorhynchus mykiss) flow-through LC50: 96h 5560-6080mg/L (Lepomis macrochirus) flow-through LC50: 96h 6020-7070mg/L (Pimephales promelas) static LC50: 96h 6420-6700mg/L (Pimephales promelas) static LC50: 96h 12946mg/L (Lepomis macrochirus) static LC50: 96h 7050mg/L (Pimephales promelas) semi-static	EC50: 48h 340.7 - 469.2 mg/L (Daphnia magna) EC50: 48h 1000 mg/L (Daphnia magna)

13. DISPOSAL CONSIDERATIONS

Whenever possible, as rules and regulations allow, please recycle or manage materials to minimize waste.

Waste Disposal Methods

Dispose of in compliance with the laws and regulations pertaining to this product in your jurisdiction.

Contaminated Packaging

Empty containers should be taken for local recycling, recovery or waste disposal.

14. TRANSPORT INFORMATION

Domestic transport regulations (USA)

DOT Not regulated

15. REGULATORY INFORMATION

International Inventories

As pet food, this product is exempted from the following inventories: U.S.A. (TSCA).

USA**Federal Regulations****SARA 311/312 Hazardous Categorization**

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

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 CFR 372.

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold limits
Zinc sulfate monohydrate	7446-19-7	3% < x < 5%	1.0% de minimis concentration [as 7733-02-0]

CERCLA/SARA 103-302

Sections 103-302 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (CERCLA/SARA). This product is not known to contain chemicals at levels which are expected to be subject to the reporting requirements of the Act or regulations contained in 40 CFR 103-302

State Regulations**State Right-to-Know**

This product may contain one or more ingredient(s) which are subject to state right to know laws. Please contact your sales representative for ingredient details if needed.

16. OTHER INFORMATION

Prepared By:	ADM - Alliance Nutrition, Inc.
Original Preparation Date:	29-Jul-2015
Revision Date:	29-Jul-2015
Revision Number:	1
Reason for revision:	Implementation into software system

Abbreviations and acronyms

A1 - Known Human Carcinogen
A2 - Suspected Human Carcinogen
A3 - Animal Carcinogen
ACGIH TLV - American Conference of Governmental Industrial Hygienists Threshold Limit Values
CAS - Chemical Abstract Service
Ceiling - Ceiling Limit Value: Concentrations that should never be exceeded at any given time (instantaneous)
Delisted - Substances Delisted from Report on Carcinogens
DNEL - Derived No Effect Level
DOT - U.S. Department of Transportation
GHS - Globally Harmonized System of Classification and Labelling of Chemicals
Group 1 - Carcinogenic to Humans
Group 2A - Probably Carcinogenic to Humans
Group 2B - Possibly Carcinogenic to Humans
IARC - International Agency for Research on Cancer
IDLH - Immediately Dangerous to Life or Health
Known - Known Carcinogen

LC50 - Lethal concentration that produces fatalities in 50% of a given test population
LD50 - Median lethal dose of a given test population
NFPA - National Fire Protection Association
NIOSH - National Institute of Occupational Safety and Health
NOAEL - No Observed Adverse Effect Level
NTP - National Toxicology Program
OECD - Organisation for Economic Co-operation and Development
OSHA - Occupational Safety & Health Administration
OSHA PEL - Occupational Safety and Health Administration Permissible Exposure Limits
PNEC - Predicted No-Effect Concentration
Present - Carcinogen or potential carcinogen to be identified under OSHA's Hazard Communication Standard
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
Skin notation - Potential for cutaneous absorption
STEL - Short Term Exposure Limit: Concentrations that should not be exceeded except for short periods of time (usually 15-minutes)
STOT - Specific Target Organ Toxicity
STV - Short Term Value (same as STEL)
TWA - Time Weighted Average: Average concentration that should not be exceeded during a work day (usually 8-hours)
Under Consideration - Under Consideration by the National Toxicology Program

The information provided on this (M)SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

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