

The attached MSDS sheet on Vitamins and/or Vitamin Premix covers the following products :

Item Numbers

005050 Beef Cox - 10X (Deccox .5 %)

005442 Tylan Sulfa-G 10-10

005521 Amprol 2.5%

Vendor:
Trouw Nutrition
TR0047

005676 Histo 1.87 Type B

005762 3 Nitro 0.5% Type B

005826 Rofenaid 2 Type B

009130 Safeguard 2.72 GM

009760 FSE Starter Vit 141

009770 FSE Starter Vit 142

009000 Selenium 90.8 MG

090019 Vit D3 30,000

090848 Biotin 100 MG

090855 Vitamin E 20,000

095132 Safeguard 1.96%

Material Safety Data Sheet

Substance Identification

Identity: **Vitamin and/or
Vitamin Premix** CAS#: NA

Manufacturer: Trouw Nutrition USA, LLC
General Offices
PO Box 219, Highland, IL 62249
618-654-2070
Emergency: Chemtrec
1-800-424-9300
Date Prepared: 5-9-01

Components and Contaminants

MATERIAL IDENTIFICATION - INGREDIENTS (Note: See the product label for specific ingredients.)

VITAMINS AND VITAMIN PREMIX FOR ANIMAL FEEDS - Vitamin Premixes contain some or all of the following:

Vitamins: A, B₁ - Thiamine, B₂ - Riboflavin, B₆ - Pyridoxine HCl, B₁₂, C-Ascorbic Acid, D₃, E-Tocopherol Acetate, K-Hetrazeen/Hetrogen, Biotin, Choline Bitartrate, Choline Chloride, Folic Acid, Menadione (MPB/MSBC), Inositol, Niacin/Niacinamide, Calcium Stearate, Sodium Alumino Silicate, Silicon Dioxide, Mineral Oil, Ethoxyquin (as a preservative).

Premixes: Vitamin Premixes
Amino Acid: Lysine/Lysine HCl

These products are animal feed additives accepted by the FDA and produced under the requirements of 21 U.S.C. 301 et seq.

HEALTH HAZARD INFORMATION

OSHA PEL - 8 hr. time weighted average of 15 mg/m³ total dust - 5 mg/m³ respirable dust (From Table Z-3, 29 CFR 1910.1000).

Note: The Occupational Safety and Health Review Commission has held that this standard does not apply to organic dusts.

The reference texts generally place vitamins in the non-toxic category, but they do indicate some acute toxicity upon the ingestion of large amounts (usually in the 15 to 30 gram range). Other vitamin premix ingredients are generally of low toxicity, or they are present in small amounts, but the texts again indicate some acute toxicity upon large dose ingestion. Eye or skin contact with some vitamins or vitamin premixes may cause irritation, and respiratory irritation could be expected from the inhalation of dust during weighing, batch addition or mixing. We have assigned the cautionary keyword "WARNING" to the vitamins and vitamin premixes for employee training purposes, and employees using premixes should be instructed to use respiratory protection if dust is anticipated during product use, and to use other protective equipment as required by the users process. Employees should wash thoroughly after handling vitamin or chemicals.

FIRST AID

- Ingestion	- Dilute with water or milk. Get medical attention. (Take the product label for identification.)
- Inhalation	- Remove to fresh air. Restore breathing. Get medical attention.
- Skin Contact	- Wash from skin with soap and water. Get medical attention for reddened or irritated skin.
- Eye Contact	- Flush eyes with water for at least 15 minutes. Get medical attention for irritation.

PHYSICAL DATA (Note: See product label for specific information.)

Vitamins are flakes, granules or powders. Choline Chloride is a liquid on an adsorbate. Premixes are mixtures of vitamins in carriers such as rice hulls, dextrose, and sodium or calcium carbonate.

FIRE, EXPLOSION AND REACTIVITY DATA

Flash Point - NA Autoignition Temperature - NA Flammable Limits - LEL - NA VEL - NA

Vitamins are stable, and will not polymerize.

Vitamins are relatively unreactive with normal feed plant chemicals.

Extinguishing media. Determined by surrounding fire. Use water fog, foam, CO₂ or dry chemical for extinguishment.

Vitamins may produce irritating or toxic fumes when heated to decomposition.

Firefighters should wear self-contained breathing apparatus and full protective equipment in fire situations.

SPECIAL PROTECTION INFORMATION

Use a NIOSH approved particulate respirator if respirable dust generation occurs or is anticipated during product use.

Use other protective equipment as required by process or additive addition conditions.

Avoid product contact with skin or eyes.

Follow product label instructions for product handling and use.

Wash thoroughly after handling.

CAUTIONARY STATEMENTS FOR PERSONS HANDLING THESE PRODUCTS (See product label for additional information)

CAUTION

- May be harmful if swallowed and may irritate eyes - Prolonged contact may irritate skin.
- Do not breathe product dust. Use with adequate ventilation.
- Avoid contact with eyes, skin and clothing.
- Wash thoroughly after handling. Keep container closed when not in use.
- These products are animal feed additives. They are not produced for human consumption.

Vitamin and/or Vitamin Premix

MATERIAL STORAGE INFORMATION

Store vitamins in a cool, dry place, away from sources of high heat.
Protect containers from damage.
Keep containers closed when not in use.

SPECIAL USE INFORMATION

Use a NIOSH approved particulate respirator if respirable dust generation occurs or is anticipated during product use.
Use other protective equipment as required by process or additive addition conditions.
Follow product label instructions for product handling and use.
Do not breathe product dust. Use with adequate ventilation.
Avoid product contact with eyes, skin and clothing.
Wash thoroughly after handling. Keep container closed when not in use.
These products are animal feed additives. They are not produced for human consumption.

SPILL, LEAK AND DISPOSAL PROCEDURES

Notify management of material spills.
Product spills should be placed in recovery systems, or be shoveled into closed containers for disposal.
Disposal: Place spills in recovery systems, or place spilled material in an approved sanitary landfill.
Follow Federal, state and local regulations for disposal.

HYGIENIC PRECAUTIONS, EMPLOYEE INSTRUCTION AND TRAINING

All employees who handle chemicals must follow good hygienic practices (i.e., wash frequently, and wear clean clothing).
All employees should be instructed to use protective equipment whenever atmospheric dust or chemical vapors are present.
All employees who may have occasion to use protective equipment should be trained in the use of the equipment.
All employees who may have occasion to enter confined spaces should be trained in confined space entry procedures.

INFORMATION PERTINENT TO THESE PRODUCTS

Vitamin ingestions may be harmful in quantity, and product contact may irritate the skin and/or eyes.
Use a NIOSH approved particulate respirator if respirable dust generation occurs or is anticipated during product use.
Use other protective equipment as required by process or additive addition conditions.
Follow product label instructions for product handling and use.
Do not breathe product dust. Use with adequate ventilation.
Avoid product contact with eyes, skin and clothing.
Wash thoroughly after handling. Keep container closed when not in use.
These products are animal feed additives. They are not produced for human consumption.

SUPPLEMENTAL SOURCES OF DATA SHEET INFORMATION - DISCLAIMER OF LIABILITY

The safety department of Trouw Nutrition USA, LLC has supplemented manufacturers data with information from other sources in order to provide our employees and managers with adequate information on chemical hazards. The duty to inform users of all the hazards of a chemical is properly that of the manufacturer or distributor, and Trouw Nutrition USA, LLC expressly denies any liability in providing this supplemental handling or toxicological data to our managers, our employees or our customers.

The following information sources were used to prepare this data sheet:

- "Patty's Industrial Hygiene and Toxicology", 3rd Revised Edition, by Clayton and Clayton (Wiley - Interscience)
- "Clinical Toxicology of Commercial Products", 5th Edition, by Gosselin Smith & Hodge (Williams & Wilkins).
- "Dangerous Properties of Industrial Materials", 4th Edition, by N. Irving Sax (VanNostrand Reinhold)

SARA TITLE III SECTION 313 SUPPLIER NOTIFICATION

NOT APPLICABLE