

MATERIAL SAFETY DATA SHEET
VITAMIN AND/OR TRACE MINERAL PREMIX

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Manufacturer:

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PRODUCT IDENTIFICATION

Identity: Vitamin and/or Trace Mineral Premix (containing hazardous ingredients exceeding 1% of the total mix)

Trade Name: None Specific

COMPONENTS AND CONTAMINANTS

Components: Trace Mineral Premixes contain some or all of the following:

Ferrous Sulfate, Ferrous Carbonate, Iron Oxide, Manganese Sulfate, Manganous Oxide, Copper Sulfate, Copper Carbonate, Copper Oxide, Zinc Oxide, Zinc Sulfate, Zinc Methionine, Calcium Iodate, Potassium Iodide, EDDI, Cobalt Carbonate, Cobalt Sulfate, Cobalt Proteinates, Zinc Proteinates, Manganese Proteinates, Iron Proteinates, Sodium Selenite, Sodium Molybdate, Sodium Sulfate, Sodium Bicarbonate, Sodium Chloride, Sulfur, Potassium Sulfate, Potassium Chloride, Potassium Magnesium Sulfate, Magnesium Sulfate, Magnesium Oxide, Calcium Sulfate, Calcium Carbonate, Tricalcium Phosphate, Dicalcium Phosphate, Monoammonium Phosphate, Monosodium Phosphate, Ammonium Chloride, Ammonium Sulfate, Clay, Bentonite, Calcium Stearate, Sodium Aluminosilicate, Silicon Dioxide, Mineral Oil & Vitamins.

Note: See the product label for specific ingredients.

Vitamin and Trace Mineral premixes may contain any or all of the following ingredients in addition to the above:

Vitamins A, B₁₂, D₃, E, K, Thiamine, Riboflavin, Niacin, Pantothenic Acid, Pyridoxine, Folic Acid, Biotin, Inositol.

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).

If one or more of the mineral ingredients in this premix exceed one percent of the total mixture, then the entire mixture must be classified as toxic according to the 29 CFR 1910.1200 (d)(5)(ii). The reference texts indicate that cobalt, copper, zinc, and selenium salts may have oral human lethal doses in the range of 50 to 500 mg/kg. Ingestion of large doses of mineral salts usually causes vomiting, but the acute effects are described as nausea, chills, and diarrhea.

HEALTH HAZARD INFORMATION CONTINUED

Eye or skin irritation may occur following ingredient contact, and respiratory irritation could be expected from the inhalation of premix dusts. Vitamin ingredients are of low toxicity, and large doses (15 to 30 grams) are required for acute vitamin toxicity to occur. For employee training purposes, we have assigned the cautionary keyword "WARNING" to these premixes due to the presence of hazardous ingredients in the mixture, and employees using premixes should be instructed to use respiratory protection if dust is anticipated during premix use, and to use other protective equipment as required by the users process to minimize exposures. Employees should be instructed to wash thoroughly after handling chemicals or chemical mixtures.

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 for continued breathing difficulty.
	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 if irritation persists.

PHYSICAL DATA

(Note: See product label for specific information.)

Premixes are mixtures of vitamins and minerals in carriers such as rice hulls, dextrose, and sodium chloride or calcium carbonate.

FIRE, EXPLOSION AND REACTIVITY DATA

(Note: Temperature and limit data supplied is for grains and grain mixtures.)

Autoignition Temperature-350-500° F. Flammable Limits-LEL-appx. 50 gr/m³ (0.050 oz/Ft) VEL-unknown

Premixes are combustible but not flammable. (i.e. combustion generally requires the continuous application of ignition to support flames.) The dispersal of organic material into the atmosphere of a confined space in high density (i.e. over 50 grams per cubic meter) could produce dust mixtures that are ignitable or explosive.

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

Premixes are stable and will not polymerize.

Premixes should be relatively unreactive with normal feed plant process chemicals or products.

Premixes may produce irritating or toxic combustion products 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 dust generation occurs or is anticipated during product use. (21B respirator is recommended.)

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

Avoid product contact with skin or eyes. Wash thoroughly after handling.

CAUTIONARY STATEMENTS FOR PERSONS HANDLING THESE PRODUCTS

WARNING: MAY BE HARMFUL IF SWALLOWED. DO NOT TAKE THIS PRODUCT INTERNALLY. DO NOT BREATH PRODUCT DUST.

Avoid contact with eyes, skin and clothing. Use with adequate ventilation. Wash thoroughly after handling. Keep away from children. Keep container closed. These products are manufactured as animal feed additives. They are not produced for human consumption.

MATERIAL STORAGE INFORMATION

Store animal feed premixes 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

Thomas Products LLC cannot predict the ultimate use of these products, and can offer no special use information beyond the need for respiratory protection in dusty atmospheres, cautioning about the fire or explosion hazards that are created by the production of dense dust atmospheres when ignited in confined spaces, and warning users against entry into confined spaces such as mixers, storage bins or tanks without the proper equipment, a watchman, and permission of the users management.

Dust conditions in the users' plant or process may require the installation of Class II, Division 1 (dust ignition proof) or Class II, Division 2 (dust tight) electrical equipment to minimize the hazards of dust fires or explosions. Articles 500 and 502 of the National Electrical Code (NFPA 70) should be consulted for specific requirements.

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. Ventilate area. Clean-up personnel require respiratory protection. Keep dust to a minimum.

DISPOSAL: Place spills in recovery systems, or send to a licensed treatment, storage and handling facility.
Follow Federal, State and Local regulations for disposal.

HYGENIC 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 that equipment.

All employees who may have occasion to enter confined spaces should be trained in confined space entry procedures.

INFORMATION PERTINENT TO THESE PRODUCTS

Vitamins and minerals are essential for health and growth, and the lack of certain vitamins and minerals in mammalian diets may produce deficiency diseases (such as rickets, scurvy, and pellagra in humans). These premixes are a dietary supplement containing the vitamins and/or minerals necessary for the growth and health of specific animal species that is added to animal feed during mixing and production by feed manufacturers. In form, these premixes are analogous to the multiple vitamin and mineral supplements that are often taken by adults, or are prescribed by physicians for children. Like similar human preparations, abuse is possible through overdosage, or by using a specific preparation for another purpose, such as using an adult preparation for children, or in the case of animal preparations, using a product that was prepared for dogs on chickens. Users of animal feed premixes are cautioned to read the product label for specie, dosage and withdrawal information, and to consult product literature, their veterinarian, or a feed professional to resolve any questions about product usage.

SUPPLEMENTAL SOURCES OF DATA SHEET INFORMATION-DICLAIMER OF LIABILITY

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

SARA TITLE III SECTION 313 SUPPLIER NOTIFICATION

This product may contain the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 and of 40 CFR 372.45:

<u>COMPONENT</u>	<u>CAS#</u>	<u>% BY WEIGHT*</u>
Cobalt Compounds	NA	1% - 99%
Copper Compounds	NA	1% - 99%
Manganous Compounds	NA	1% - 99%
Zinc Compounds	NA	1% - 99%

*Refer to individual tag and formulation information for actual concentrations.
This information must be included in all MSDS's that are copied and distributed for this material.

END OF MATERIAL SAFETY DATA SHEET

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