



Agri-Empresa, Inc.

Manufacturer • Packager • Distributor
OIL FIELD CHEMICALS

6001 West Industrial
Midland, Texas 79703

Yellow Starch

| SECTION I | |
|---|--|
| MANUFACTURER'S NAME Lincoln Grain, Inc. | EMERGENCY TELEPHONE NO. 913-367-3251 |
| ADDRESS (Number, Street, City, State, and ZIP Code) P.O. Box 436, Atchison, Kansas 66002 | |
| CHEMICAL NAME AND SYNONYMS Milled Corn Product | TRADE NAME AND SYNONYMS Lincoln Drilling Starch |
| CHEMICAL FAMILY Organic - (Corn) | FORMULA No Hazardous Ingredients |

| SECTION II - HAZARDOUS INGREDIENTS - Not Applicable | | | | | |
|---|---|-------------|---|---|-------------|
| PAINTS, PRESERVATIVES, & SOLVENTS | % | TLV (Units) | ALLOYS AND METALLIC COATINGS | % | TLV (Units) |
| PIGMENTS | | | BASE METAL | | |
| CATALYST | | | ALLOYS | | |
| VEHICLE | | | METALLIC COATINGS | | |
| SOLVENTS | | | FILLER METAL PLUS COATING OR CORE FLUX | | |
| ADDITIVES | | | OTHERS | | |
| OTHERS | | | | | |
| HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES | | | | % | TLV (Units) |
| | | | | | |
| | | | | | |
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| SECTION III - PHYSICAL DATA - Applicable as Noted | | | |
|---|----------------------------------|---------------------------------------|--------------|
| BOILING POINT (°F.) | | SPECIFIC GRAVITY (H ₂ O=1) | 1.10 to 1.25 |
| VAPOR PRESSURE (mm Hg.) | | PERCENT, VOLATILE BY VOLUME (%) | |
| VAPOR DENSITY (AIR=1) | | EVAPORATION RATE (_____ =1) | |
| SOLUBILITY IN WATER | 20-30% | | |
| APPEARANCE AND ODOR | Yellow Flour - Slight Corn Aroma | | |

| SECTION IV - FIRE AND EXPLOSION HAZARD DATA - Applicable as Noted | | | |
|--|------------------|-----|-----|
| FLASH POINT (Method used) | FLAMMABLE LIMITS | LeI | Uel |
| EXTINGUISHING MEDIA Water or any commercial fire extinguisher | | | |
| SPECIAL FIRE FIGHTING PROCEDURES Avoid creating air suspended flour or dust particles around ignition source | | | |
| UNUSUAL FIRE AND EXPLOSION HAZARDS During mixing operations avoid creating suspended flour particles and eliminate any source of ignition | | | |

MATERIAL IDENTIFICATION- CORN MEAL, CORN FLOUR, and MILLED CORN PRODUCTS

INGREDIENTS: Milled Corn Products - CAS Number: not available

Note: Corn Products are produced for human and animal consumption under the requirements of 21 U.S. C. 301 et seq.

DISTRIBUTOR

ConAgra Specialty Grain Products Company, 9 ConAgra Drive, Omaha, NE 68102-5009, Telephone 402-595-4532

HEALTH HAZARD INFORMATION: OSHA PEL – 8 hour Time Weighted Average exposure of 15 mg/m³

Corn products are produced for human and animal consumption, and the references list no toxicological effects from ingestion. Product dust may be irritating to the skin, eyes and respiratory tract. Asthmatics and allergenic or hypersensitive persons may be sensitive to product dust, and these persons should avoid prolonged or repeated exposure to product dust. Product handlers should wash thoroughly after product handling or use. Product handlers should use a NIOSH approved particulate respirator in product atmospheres that exceed the OSHA Permissible Exposure Limit of 15 mg/m³. Product handlers are warned against entering product storage tanks or bins alone, or without following confined space entry and equipment lockout regulations.

FIRST AID-

| | |
|---------------|---|
| Ingestion- | Should not be a problem. Get medical attention if required. |
| Inhalation- | Remove to fresh air. Restore breathing if necessary. Get medical attention if necessary. |
| Skin Contact- | Wash from skin with soap and water. Get medical attention for reddened or irritated skin. |
| Eye Contact- | Flush eyes thoroughly with water for at least 15 minutes. Get medical attention if necessary. |

Target Organ(s): Respiratory system (inhalation), skin/eyes (contact)

Carcinogenicity: the IARC, NTP or OSHA does not list Milled corn products as carcinogenic.

PHYSICAL DATA Note: Milled corn products are not chemicals as defined in 29 CFR 1910.1200© of the OSHA Standards.

Corn products are yellowish with essentially no odor.
Typical product analysis is 8-10% protein, 12-14% moisture, and 0.5% fat.

FIRE, EXPLOSION AND REACTIVITY DATA Ignition Temp. 390-500°F. - Flammable Limits: LEL- Appx. 50 gr/m³ (0.050 oz/ft³)- UEL- n.a.

Corn products are combustible not but generally flammable. (I.e., combustion normally requires the continuous application of ignition to support combustion.) The dispersal of corn products into confined atmospheres at high density (over 50 grams per cubic meter) could produce product and air mixtures that are ignitable or explosive. **DO NOT WELD OR BURN ON OPERATING PRODUCT SYSTEMS OR CONVEYORS. OBTAIN SUPERVISORY PERMISSION AND A WRITTEN WELDING PERMIT BEFORE STARTING ANY HOT WORK OPERATION.**

Extinguishing Media: Determined by surrounding fire. USE WATER FOG, foam, CO₂ or dry chemical for extinguishment. **CONTROL RUNOFF. DO NOT USE STRAIGHT STREAMS TO EXTINGUISH PRODUCT FIRES. DUST DISPERSED BY HOSE STREAMS COULD EXPLODE! USE WATER FOG ONLY.** Corn products may produce toxic or harmful combustion products when heated to decomposition.
Firefighters should wear self-contained breathing apparatus and full protective equipment in all fire situations.

SPECIAL PROTECTION INFORMATION – PROTECTIVE EQUIPMENT RECOMMENDATIONS

Avoid product or dust contact with the eyes, and prolonged or repeated product or dust contact with the skin.
Use a NIOSH approved particulate respirator if respirable dust generation occurs or is anticipated during product use. Use other protective equipment such as gloves and/or goggles as required by process conditions to prevent product contact. Wash thoroughly after product handling or use. Do not enter bins or tank where products are stored alone, or without following accepted confined space entry procedures. Report leaking product system conveyors or dust producing equipment to management for correction.

CAUTIONARY STATEMENTS FOR MILLED CORN PRODUCTS

CAUTION- Product dusts may irritate the eyes and respiratory system. Avoid breathing product dust. Prolonged or repeated product or dust contact may irritate sensitive skin. Wash thoroughly after handling product. **DO NOT BURN OR WELD ON OPERATING PRODUCT CONVEYORS. OBTAIN SUPERVISORS PERMISSION AND WRITTEN PERMIT BEFORE WELDING.**

MATERIAL STORAGE INFORMATION

Corn products are combustible. Store corn products in a cool, dry place, away from sources of high heat. Protect product bags or other containers from damage. Keep product bags or other containers closed when not in use.

SPECIAL PRODUCT USE INFORMATION

ConAgra cannot predict the ultimate use of these products, and cannot offer any special product use information beyond the need for respiratory protection in dusty atmospheres, cautioning about the possible dust explosion hazard created by dense product dust atmospheres when ignited in confined spaces, and cautioning against personal entry into confined spaces or process equipment without the use of the proper entry equipment, energy source lockout, a watchman, and the written permission of management.

ConAgra Grain Processing Companies- Material Safety Data Sheet

Dust conditions in the users facility may require the installation of Class II, Division 1 (dust- ignition- proof), of Class II, Division 2 (dust- tight) electrical equipment to minimize the hazard of dust fires or explosions. See Articles 500 and 502 of the National Electrical Code (NFPA 70) for specific electrical requirements.

Class II, Division 2 (dust-tight) electrical equipment is acceptable if product dust will not normally be in suspension in quantities sufficient to produce explosive or ignitable mixtures (i.e., below 50 gr/m³ or 0.050 oz/ft³).

Extremely dusty environments or operations may require Class II, Division 1 (dust- ignition- proof) electrical equipment.

DO NOT BURN OR WELD ON OPERATING PRODUCT SYSTEM CONVEYORS. OBTAIN SUPERVISORS PERMISSION AND A WRITTEN PERMIT BEFORE WELDING.

Product handlers are cautioned to avoid breathing product dust, and handlers should use a NIOSH approved particulate respirator if atmospheric dust levels exceed 10 mg/m³ (see Table Z-1-Z of 29 CFR 1910.1000 [the Occupational Safety and Health Standards]).

Product handlers are cautioned against entering product storage bins or tanks alone, or without a safety belt or harness with in attached lifeline which has been properly snubbed by a watchman to prevent descent below the surface of the space to be entered. Entry into confined spaces should not be attempted without specific written permission from facility management, and the lockout of all equipment located within the space.

SPILL, LEAK AND DISPOSAL PROCEDURES (Note: Follow Federal, state and local regulations for product disposal.)

Product spills should be swept or vacuumed into recovery systems, or be shoveled into closed containers for recovery or disposal. Disposal: Recover spills for reuse, or place material in an approved sanitary landfill or incinerator.

HYGIENIC PRECAUTIONS, USER INSTRUCTION AND TRAINING

Persons who handle grain products must follow good hygienic practices (i.e., wash frequently, and wear clean clothing). Product users should use protective equipment whenever atmospheric dust and/or chemical vapors are present. Persons who may have occasion to use protective equipment should be trained and supervised in the use of that equipment. Persons who may have occasion to enter confined spaces should be trained in accepted confined space entry procedures.

REGULATORY INFORMATION – REFERENCE SOURCES - DISCLAIMER OF LIABILITY

Grain products are not chemicals as defined in 29 CFR 1910.1200© of the Federal Occupational Safety and Health Standards, and the Hazard Communication Standard is therefore not applicable to these products. This data sheet was prepared in order to provide our managers, employee and customers with information about these products that is essential their to safety and health. ConAgra cannot predict the ultimate uses of these products, and it expressly denies any liability for injuries or illnesses that might occur from unanticipated or non-normal product uses or from failure to use respiratory protection or personal protective equipment. 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 and Hodge (Williams and Wilkins)
- "Dangerous Properties of Industrial Materials", 6th Edition, by N. Irving Sax (VanNostrand Reinhold)
- "The O.S.H.A. Standards", 20 CFR 1910 et al of July 1, 1989, Office of the Federal Register, Washington DC 20402

NOTE: O.S.H.A. Standards change, and users should obtain current regulations or information from the local O.S.H.A. Area Office