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I. PRODUCT IDENTIFICATION

PRODUCT NAME: LESCO PRE-M® Plus Fertilizer (0.75% - 1.5% Pendimethalin; all fertilizer analyses)
Chemical Family: Dinitroaniline
Chemical Name/Synonyms: N-(1-ethylpropyl)-3,4-dimethyl-2,6-dinitrobenzenamine

II. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	%(by/wt.)	CAS #	PEL/TLV
Pendimethalin	0.75 – 1.50%	40487-42-1	3 mg/M3 – recommended
Formulated with one or more of the following ingredients. Check specific product label.			
Urea	0 – 98	57-13-6	10 mg/m3 (dust) 5 mg/ms (resp)
Potassium Chloride	0 – 95	7447-40-7	10 mg/m3
Potassium Sulfate	0 – 95	7778-80-5	10 mg/m3
Monoammonium Phosphate	0 – 95	7722-76-1	15 mg/m3 (dust) 5 mg/m3 TLV
Diammonium Phosphate	0 – 95	7783-28-0	15 mg/m3 (dust) 5 mg/m3 (resp)
Ammonium Sulfate	0 – 95	7783-20-2	15 mg/m3 (dust)
Calcium Carbonate	0 – 95	471-34-1	15 mg/m3 (resp)
Sulfur	0 – 20	7704-34-9	ND
Iron (Ferric) Oxide	0 – 10	1309-37-1	15 mg/m3 (dust)
Iron (Ferrous) Sulfate	0 – 10	7720-78-7	15 mg/m3 (dust)
Manganese Oxide	0 – 10	1317-35-7	5 mg/m3 (dust)
Magnesium Sulfate	0 – 10	7487-88-9	15 mg/m3 (dust)
Ethylene dichloride	0 – 1	107-06-2	10 ppm ACGIH 40 ppm STEL

III. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Primary Route(s) of Entry: Eyes, Skin, Inhalation, Ingestion
POTENTIAL HEALTH EFFECTS: Harmful if swallowed. Causes eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing.
EYE: Moderate eye irritation
SKIN: Moderate skin irritation
INHALATION: Overexposure to dusts may cause mucous membrane and upper respiratory irritation
INGESTION: Ingestion of large amounts may cause gastrointestinal disorder, nausea, vomiting, and/or diarrhea.
MEDICAL CONDITIONS AGGRAVATED: None known
POTENTIAL ENVIRONMENTAL HAZARDS: This product is toxic to fish. DO NOT apply directly to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. DO NOT contaminate water by cleaning of equipment or disposal of equipment washwaters or rinsate.

IV. FIRST AID MEASURES

EYES: Hold eye open and rinse slowly and gently with water for 15 – 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Call a poison control center or doctor for treatment advice.
SKIN: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 – 20 minutes. Call a poison control center or doctor for treatment advice.
INHALATION: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

INGESTION: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

NOTES TO MEDICAL DOCTOR: Pendimethalin is a strongly orange-red colored compound. – virtually an aniline dye. Cases have been described of orange-yellow coloration of urine following heavy exposure of workers to the dust of pendimethalin. Despite its structure as both a nitro-compound and aromatic amine, exposure to pendimethalin is NOT associated with methemoglobinemia. Treat symptomatically.

V. FIRE FIGHTING MEASURES

Flash Point (Method Used): NA

Lower Explosion Limits: NA

NFPA/HMIS Rating: Health: 2

EXTINGUISHING MEDIA: Foam
 Dry Chemical

Auto Ignition Temperature: NA

Upper Explosion Limits: NA

Fire: 1 **Reactivity:** 0

Alcohol Foam CO₂
 Water Fog Other

EXPLOSION HAZARDS: Organic dusts may form an explosive dust/air mixture. Contamination with strong acids may create an explosion hazard.

FIRE FIGHTING PROCEDURES: Firefighters should be equipped with self-contained breathing apparatus and turnout gear. Avoid breathing dusts, vapors and fumes from burning materials. Control run-off water. If water enters a drainage system, advise authorities downstream. Fertilizer will become slippery when wet. Guard against falls.

HAZARDOUS COMBUSTION PRODUCTS: At high temperatures, nitrogen containing fertilizer can form cyanuric acid, hydrogen cyanide and ammonia. Ammonium carbamate may also be formed.

VI. ACCIDENTAL RELEASE MEASURES

RELEASE NOTES: If material is spilled, evacuate area and ventilate. Wear protective equipment. If dry, sweep or shovel into a container for reuse per label instructions, or disposal. If liquid, contain spill and absorb with inert material and place in container for disposal. Prevent run-off from entering drains, sewers or water sources. Avoid contact with skin, eyes, and clothing.

VII. HANDLING AND STORAGE

GENERAL PROCEDURES: Store in original container in a cool, dry secured storage area. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Avoid contact with eyes, skin or clothing. Keep away from heat, sparks, or other ignition sources.

OTHER PRECAUTIONS: Avoid inhalation of dust. Wash thoroughly with soap and water after handling. Keep out of reach of children.

VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Work in well ventilated areas. Whenever possible, engineering controls should be used to minimize the need for personal protective equipment.

PERSONAL PROTECTION EQUIPMENT:

EYES AND FACE: Chemical goggles when respirator does not provide eye protection.

RESPIRATORY: NIOSH/MSHA approved respirator should be worn if large quantities of dust are generated or prolonged exposure possible.

GLOVES: Chemical resistant gloves

PROTECTIVE CLOTHING: Long-sleeved shirt and long pants, shoes plus socks

WORK HYGIENIC PRACTICES: Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing. Remove contaminated clothing and wash separately before reuse. Follow manufacturers' instructions for changing/maintaining PPE. If no such instructions exist for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

COMMENTS: Have eye washing facility readily available where eye contact can occur.

IX. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: NA

MELTING POINT: 133C (Urea)

VAPOR DENSITY (air = 1): NA

SPECIFIC GRAVITY: NA

EVAPORATION RATE: NA

VAPOR PRESSURE: NA

ODOR: Nutty
APPEARANCE: Yellow granules
pH: NA

SOLUBILITY IN WATER: Disperses
PERCENT VOLATILE: NA
BULK DENSITY (lbs./cu ft): 45 – 65

X. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: None
STABILITY: Stable
POLYMERIZATION: Will not occur
INCOMPATIBLE MATERIALS: Oxidizing agents, strong alkali
HAZARDOUS DECOMPOSITION PRODUCTS: Possible combustion products include oxides of carbon, sulfur and nitrogen. Urea also decomposes to biuret and cyanuric acid. Urea reacts with sodium or calcium hypochlorite to form explosive nitrogen trichloride.

XI. TOXICOLOGICAL INFORMATION

DATA FOR PENDIMETHALIN TECHNICAL:

EYE EFFECTS: (Rabbit): Slightly to moderately irritating
SKIN EFFECTS: (Rabbit): Not irritating
DERMAL LD₅₀: (Rabbit): > 5000 mg/kg
ORAL LD₅₀: (Rat, male): 4665 mg/kg; (Rat, female): 5000 mg/kg
INHALATION LC₅₀: (Rat, 1-hr calculated): > 26.92 mg/L; (Rat, 4-hr actual): > 6.73 mg/L
SENSITIZATION: (Guinea pig): Not a sensitizer. However, data generated by another company has indicated that pendimethalin is a skin sensitizer.
ACUTE EFFECTS FROM OVEREXPOSURE: Slight to moderately irritating to eyes and skin.) rat study.
CHRONIC EFFECTS FROM OVEREXPOSURE:
Oncogenicity: A marked depression in body weight gain and statistically significant increase in benign thyroid proliferative lesions were observed at the highest dose tested (5000 ppm) in the lifetime (24 months). The US EPA has classified pendimethalin an oncogenicity rating of “low c” (possible human carcinogen)
CARCINOGENICITY:
IARC: Ethylene dichloride – Group 2 B (possibly carcinogenic to humans)
NTP: Pendimethalin – reasonably anticipated to be a human carcinogen

OSHA: Not Listed
OTHER: NA

XII. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: This product is toxic to fish. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters or rinsate.
ECOTOXICOLOGICAL INFORMATION:
For the active ingredient – pendimethalin:
Rainbow trout, 96 hr LC₅₀ – 0.89 mg/L
Bluegill sunfish, 96 hr LC₅₀ – 0.2 mg/L
Sheepshead minnow, 96 hr LC₅₀ – 0.707 mg/L
Daphnia magna, 48 hr EC₅₀ – 0.977 mg/L
Mallard duck, Oral LD₅₀ – 1421 mg/kg
Bobwhite quail, LC₅₀ – 4187 ppm
Honeybee, 48 hr Contact LD₅₀ > – 100 ug/bee
Honeybee, 48 hr Oral LD₅₀ > – 100 ug/bee
Pendimethalin technical is very toxic to fish, aquatic invertebrates, and algae, toxic to birds, and practically non-toxic to Honeybees.

XIII. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS:
Pesticide: Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, State or local procedures. Or call (1-800-CLEANUP) for disposal instructions. Never place unused product down any indoor or outdoor drain.
Container: Do not reuse bag. Dispose of emptied bag(s) in a sanitary landfill approved for pesticide disposal, or by incineration.

XIV. TRANSPORTATION INFORMATION:

DOT Transportation:

Not Regulated

Proper Shipping Name:

NA

Hazard Class:

NA

U.S. Surface Freight Class:

NA

Marine Pollutant #1:

ND

HM 181 Shipping Name:

NA

ID NO.:

NA

Reportable Quantity (RQ lbs):

Ethylene dichloride - 100

XV. REGULATORY INFORMATION – UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):**SEC 311/312:****N Immediate (Acute Health)****N Delayed (Chronic Health)****N Fire****N Sudden Release of Pressure****N Reactivity****SEC 302 (Extremely Hazardous Substance): NA****SEC 304 (Emergency Release Notification): NA****SEC 313 (Toxic Chemicals): Pendimethalin (40487-42-1); Ethylene dichloride (107-06-2)****CERCLA RQ:** Ethylene dichloride (107-06-1) 100 lbs; RCRA U077**CAA RQ:** NA**EPA Registration No.:** 10404-82; 10404-98; 10404-100; 10404-101; 10404-102; 538-214-10404

NOTE: NA=Not Applicable; ND=Not Determined; NE=Not Established

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