



# MATERIAL SAFETY DATA SHEET #4306

15885 Sprague Road, Strongsville, OH 44136

**Emergency Phone:** LESCO: (800) 321-5325**CHEMTREC:** (800) 424-9300**DATE ISSUED:** 05/11/01**SUPERSEDES:** 03/14/00

## I. PRODUCT IDENTIFICATION

**Product:** LESCO® PRE-M® Plus Fertilizer (all % active), Pendulum Plus Fertilizer, LESCO® 0-0-7 PRE-M 0.86% Plus Fertilizer Preemergent Weed Control, LESCO® 19-3-7 PRE-M® 0.86% Plus Fertilizer Preemergent Weed Control, LESCO® Professional Combination Product Preemergent Weed Control Pre-M® 0.86% Plus Fertilizer, LESCO® Professional Combination Product Preemergent Weed Control Pre-M® 1.15% Plus Fertilizer, LESCO® Professional Combination Product Preemergent Weed Control Pre-M® 1.31% Plus Fertilizer

**Chemical Family:** Dinitroaniline**Chemical Name/Synonyms:** Pendimethalin

## II. PRODUCT INFORMATION: INGREDIENTS

Chemical Name	TLV/TWA	%(by wt.)	CAS#
Pendimethalin: N-(1-ethylpropyl)-3,4-dimethyl-2,6-dinitrobenzenamine	5.0 mg/M <sup>3</sup>	0.2-1.5%	40487-42-1
Formulated with one or more of the following ingredients. Check specific product label.			
Urea	10 mg/M <sup>3</sup> (dust) 5 mg/M <sup>3</sup> (resp)	0-98	57-13-6
Potassium Chloride	10 mg/M <sup>3</sup>	0-95	7447-40-7
Potassium Sulfate	10 mg/M <sup>3</sup>	0-95	7778-80-5
Monoammonium Phosphate	15 mg/M <sup>3</sup> (dust) 5 mg/M <sup>3</sup> TLV	0-95	7722-76-1
Diammonium Phosphate	15 mg/M <sup>3</sup> (dust) 5 mg/M <sup>3</sup> (resp)	0-95	7783-28-0
Ammonium Sulfate	15 mg/M <sup>3</sup> (dust)	0-95	7783-20-2
Calcium Carbonate	ND	0-95	471-34-1
Sulfur	5 ppm(SO <sub>2</sub> )	0-20	7704-34-9
Iron (Ferric) Oxide	15 mg/M <sup>3</sup> (dust)	0-10	1309-37-1
Iron (Ferrous) Sulfate	15 mg/M <sup>3</sup> (dust)	0-10	7720-78-7
Manganese Oxide	15 mg/M <sup>3</sup> (dust)	0-10	1317-35-7
Magnesium Sulfate	15 mg/M <sup>3</sup> (dust)	0-10	7487-88-9

## III. PHYSICAL AND CHEMICAL CHARACTERISTICS

<b>Boiling Point:</b>	NA	<b>Specific Gravity (water=1):</b>	NA
<b>Melting Point:</b>	133° C(urea)	<b>Bulk Density (lbs./cu. ft.):</b>	45-65
<b>Vapor Pressure (mm Hg):</b>	NA	<b>Evaporation Rate:</b>	NA
<b>Vapor Density (air = 1):</b>	NA	<b>Percent Volatile:</b>	NA
<b>Solubility in Water:</b>	Disperses	<b>Appearance and Odor:</b>	Yellow granules, nutty odor.
<b>pH:</b>	NA		

**IV. FIRE AND EXPLOSION HAZARD DATA**

<b>Flash Point</b> (method Used):		NA	<b>Auto Ignition Temperature:</b>	NA
<b>Lower Explosion Limits:</b>		NA	<b>Upper Explosion Limits:</b>	NA
<b>NFPA/HMIS RATING:</b>	HEALTH 2	FIRE 1	REACTIVITY 0	
<b>Extinguishing Media:</b>	<input checked="" type="checkbox"/> Foam <input checked="" type="checkbox"/> Water Spray	<input type="checkbox"/> Alcohol Foam <input type="checkbox"/> Other	<input checked="" type="checkbox"/> Dry Chemical <input checked="" type="checkbox"/> CO <sub>2</sub>	

**Special Fire-Fighting Procedures:** Wear self-contained, positive pressure breathing apparatus and full fire fighting protective clothing. Keep unnecessary people away. Use as little water as possible. Dike area of fire to prevent pesticide run-off. Use spray or fog - solid stream may cause spreading.

Do not contaminate personnel or equipment, or handle broken packages or containers without protective equipment as specified in the Exposure Control Section. Decontaminate emergency personnel with soap and water before leaving the fire area

Avoid breathing dusts, vapors and fumes from burning materials. Control run-off water - if water enters a drainage system, advise the authorities downstream.

Avoid heavy dose streams; airborne dusts may create an explosion hazard. Fertilizer will become slippery when wet. Guard against falls.

**Unusual Fire and Explosion Hazards:** This material has been tested in a 20-liter spherical bomb and has been found to be a Class ST-1 dust explosion hazard. If the material is further processed, the dust explosion hazard may change and it should be retested. At high temperatures, nitrogen containing fertilizer can form cyanuric acid, hydrogen cyanide and ammonia. Ammonium carbamate may also be formed. Contamination with strong acids may create an explosion hazard. Fertilizer will become slippery when wet. Guard against falls.

**V. HEALTH HAZARDS**

**Primary Route(s) of Entry:** Skin, eyes, inhalation, ingestion.

**Signs & Symptoms of Exposure**

**Acute:** The combined acute oral LD<sub>50</sub> in male and female rats was greater than 5000 mg/kg, indicating that the material is practically non-toxic by ingestion in single doses.

The combined acute dermal LD<sub>50</sub> in male and female rabbits was greater than 2000 mg/kg, indicating the product is no more than slightly toxic by single skin applications.

The material was moderately irritating to both eye and skin in animal studies (rabbit).

Based upon results of a sensitization study in guinea pigs, PRE-M 60 DG was considered a non-sensitizing agent. Direct contact of this product with the skin or sclera of the eyes may cause orange-yellow staining which will, however, fade in time.

**Chronic: Pendimethalin:**

**Mutagenicity:** In an evaluation of data from a battery of six genotoxicity tests, pendimethalin was judged to be nongenotoxic.

**Teratogenicity:** No teratogenic or fetotoxic effects were observed in rats or rabbits.

**Reproduction:** No reproductive effects were observed in a three-generation reproduction study conducted with rats.

**Oncogenicity:** No oncogenic effects were observed at all dosed levels tested in the lifetime (18 months) mouse study.

The highest dose tested was 5000 ppm in the diet.

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) rat study.

**Emergency First-Aid Procedures**

**Eyes:** Flush with copious amounts of water. Get medical attention if irritation persists.

**Skin:** Remove contaminated clothing. Wash with soap and water. Get medical attention if irritation persists.

**Inhalation:** Remove to fresh air.

**Ingestion:** Drink two glasses of water. Induce vomiting by touching the back of the throat with fingers.

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

**Toxicity Information:**

**Oral LD<sub>50</sub>:** Acute(rat): >5000 mg/kg

**Dermal LD<sub>50</sub>:** Acute(rabbit): >2000 mg/kg

**Eye Irritation:** Moderate **Skin Irritation:** Moderate, non-sensitizing

**Positive Teratogen or Mutagen Carcinogen(NTP):** No

**Potential Carcinogen (IARC or OSHA):** No

**VI. REACTIVITY**

**Stability:**  Stable  Unstable

**Conditions to Avoid:** None

**Incompatibility:** Avoid contamination with oxidizing agents or strong alkalies.

**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.

**Hazardous Polymerization:**  Will not occur  Will occur

**VII. SPILL, LEAK, AND DISPOSAL PROCEDURES**

**If material is spilled:** 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 from entering drains, sewers or water sources. Avoid contact with skin, eyes, clothing.

**Waste Disposal Method:** Dispose according to Federal EPA procedures as outlined in the Resource Conservation Recovery Act (RCRA) and follow state and local guidelines. Be sure containers are completely empty before disposal.

**VIII. SPECIAL PROTECTION INFORMATION****Protective Equipment Suggested for Outdoor Application:**

Impervious Gloves             Dust Mask                             Respirator (use NIOSH/MSHA approved)  
 Impervious Boots             Clean Clothing                     Eye Goggles / Safety Glasses

**Protective Equipment Suggested for Confined Areas:**

Sufficient Ventilation             Respirator (use NIOSH/MSHA approved)  
 Dust Mask                             Splash Goggles/Safety Glasses  
 Eyewash Station                     Emergency Shower             Impervious Apron

**IX. STORAGE AND HANDLING**

**Precautions:** Store in a cool, dry place if possible. Separate from other pesticides, fertilizers, seed, feed, foodstuffs, and away from drains, sewers, and water sources.

**Other Precautions:** Do not store in temperatures above 120° F. Keep away from fire, sparks or other ignition sources. Segregate from oxidizers and incompatible material listed under Reactivity Data Section. Due to dust explosion hazard, all equipment should have explosion venting per NFPA 68-1978. All electrical wiring and equipment should meet the provisions of NFPA-70. Store in original, unopened or sealed containers. Do not store in unmarked containers. Wash thoroughly with soap and water after handling.

**X. FEDERAL REGULATORY INFORMATION:****SARA TITLE III; SEC. 311/312 HAZARD CATEGORIES**

N Immediate (acute Health)    SEC 302: NA

N Delayed (Chronic) Health    SEC 304: NA

N Fire

SEC 313: NA

N Sudden Release of Pressure

CERCLA RQ: NA

N Reactivity

CAA RQ: NA

EPA Reg. No.:                            10404-82, 538-214-10404

HM 181 Shipping Name: Not Regulated.

NA = Not Applicable

ND = Not Determined

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