MATERIAL SAFETY DATA SHEET #4055

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DATE ISSUED: 1/15/07
SUPERSEDES: NEW

I. PRODUCT IDENTIFICATION

PRODUCT NAME: LESCO Eliminate LO Broadleaf Herbicide
Chemical Family: Mixture
Chemical Name/Synonyms: 2,4-D, MCPP-p, Dicamba

II. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	%(by/wt.)	CAS #	PEL/TLV
Triisopropanolamine Salt of 2,4-Dichlorophenoxyacetic Acid	47.33	32341-80-3	ACGIH TWA 10 mg/M^3
Dimethylamine Salt of (+)-R-2-(2-Methyl-4-Chlorophenoxy) propionic acid	8.17	66423-09-4	NE
Dicamba Acid	2.30	1918-00-9	NE
Other ingredients	42.20	NA	

III. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Primary Route(s) of Entry: Eyes, Skin, Inhalation, Ingestion
POTENTIAL HEALTH EFFECTS: Keep out of reach of children. DANGER. Corrosive. Causes irreversible eye damage. Harmful if swallowed. Do not get in eyes or on clothing.
EYE: Causes irreversible eye damage. Vapors and mist can cause irritation.
SKIN: Minimally irritating. Overexposure by skin absorption may cause symptoms similar to those for ingestion.
INHALATION: Low inhalation toxicity.
INGESTION: Harmful if swallowed. May cause headache, dizziness, nausea, vomiting, gastrointestinal irritation, weakness and central nervous system depression.
MEDICAL CONDITIONS AGGRAVATED: Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis. Skin contact may aggravate existing skin disease.
POTENTIAL ENVIRONMENTAL HAZARDS: This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and non-target plants. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from target area. Clean and rinse spray equipment using soap or detergent and water, and rinse thoroughly before reuse for other spraying. When cleaning equipment, do not pour the washwater on the ground; spray or drain over a large area away from wells and other water sources. Do not contaminate water when disposing of equipment washwaters. Do not apply this product through any type of irritation system. Do not contaminate domestic or irrigation waters.

Most cases of groundwater contamination involving phenoxy herbicides such as 2,4-D and MCPP-p have been associated with mixing/loading and disposal sites. Caution should be exercised when handling these herbicides at such sites to prevent contamination of groundwater supplies. Use of closed systems for mixing or transferring this pesticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

IV. FIRST AID MEASURES

EYES: Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
SKIN: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 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 by 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: None known

V. FIRE FIGHTING MEASURES

Flash Point (Method Used): NA
Auto Ignition Temperature: ND
Lower Explosion Limits: ND
Upper Explosion Limits: ND
NFPA/HMIS Rating: Health: 3 Fire: 1 Reactivity: 0

EXTINGUISHING MEDIA:

[X]	Foam (large fires)	[ ]	Alcohol Foam	[X]	CO_2 (small fires)
[X]	Dry Chemical (small fires)	[X]	Water Spray (large fires)	[ ]	Other

EXPLOSION HAZARDS: If water is used to fight fire, contain runoff, using dikes to prevent contamination of water supplies. Dispose of fire control water later.
FIRE FIGHTING PROCEDURES: Firefighters should wear NIOSH/MSMA approved self-contained breathing apparatus and full fire-fighting turn out gear. Dike areas to prevent runoff and contamination of water sources. Dispose of fire control water later.
HAZARDOUS COMBUSTION PRODUCTS: (Under fire conditions): May produce gases such as hydrogen chloride and oxides of carbon and nitrogen.

VI. ACCIDENTAL RELEASE MEASURES

RELEASE NOTES: If material is spilled, wear appropriate protective gear for the situation. Prevent material from entering public sewer systems or any waterways. Do not flush to drain. Dike spill using absorbent or impervious materials such as earth, sand or clay. Collect and contain contaminated absorbent and dike material for disposal. Pump any free liquid into an appropriate closed container. Collect washings for disposal. Decontaminate tools and equipment following cleanup. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal. Large spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

VII. HANDLING AND STORAGE

GENERAL PROCEDURES: Do not get in eyes or on clothing. Users should wash hands, face and arms with soap and water before eating, drinking, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove Personal Protective Equipment (PPE) immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.
If the container is over one gallon and less than five gallons, then persons engaged in open pouring of the product must also wear coveralls or a chemical-resistant apron. If the container is five gallons or more in capacity, do not open pour product from the container. A mechanical system (such as a probe and pump or spigot) must be used for transferring the contents of the container. If the contents of a non-refillable pesticide container are emptied, the probe must be rinsed before removal.
OTHER PRECAUTIONS: Always use original container to store pesticides in a secured warehouse or storage building. Store at temperatures above 32F. If allowed to freeze, remix before using. This does not alter the product. Containers should be opened in well-ventilated areas. Keep container tightly sealed when not in use. Do not stack cardboard cases more than two pallets high. Do not store near open containers of fertilizer, seed or other pesticides. Do not contaminate water, food or feed by storage or disposal.

VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Where engineering controls are indicated by specific use conditions or a potential for excessive exposure, use local exhaust ventilation at the point of generation.
PERSONAL PROTECTION EQUIPMENT:

EYES AND FACE: Face shield, goggles or safety glasses with front, brow and temple protection.
RESPIRATORY: Not normally required. If vapors or mists exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.
GLOVES: Chemical-resistant gloves
PROTECTIVE CLOTHING: Coveralls over short-sleeved shirt and short plants, chemical-resistant footwear, socks. When open pouring the product, or cleaning equipment, mixing, or loading, also wear a chemical-resistant apron.

WORK HYGENIC PRACTICES: Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material: 1) do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored; 2) wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.
COMMENTS: Emergency eyewash or water supply and an emergency shower or water supply should both be readily accessible to the work area.

IX. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: ND
MELTING POINT: NA
VAPOR DENSITY (air = 1): ND
ODOR: Slight amine odor
APPEARANCE: Amber colored liquid
pH: 5.62 (1% solution)
SPECIFIC GRAVITY: 1.171 @ 20C
EVAPORATION RATE: ND
VAPOR PRESSURE: ND
SOLUBILITY IN WATER: Soluble
VISCOSITY: 40.69 cps @ 20C
DENSITY (lbs./gal): 9.75
Note: Physical data are typical values, but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification.

X. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Excessive heat. Do not store near heat or flame.
STABILITY: Stable
POLYMERIZATION: Will not occur
INCOMPATIBLE MATERIALS: Strong oxidizing agents: bases and acids
HAZARDOUS DECOMPOSITION PRODUCTS: (Under fire conditions): May produce gases such as hydrogen chloride and oxides of carbon and nitrogen.

XI. TOXICOLOGICAL INFORMATION

EYE EFFECTS: (Rabbit): Severely irritating/corrosive
SKIN EFFECTS: (Rabbit): Minimally irritating
DERMAL LD_{50}: (Rabbit): >5,000 mg/kg
ORAL LD_{50}: (Rat): >500 and <5,000 mg/kg
INHALATION LC_{50}: (Rat 4-hr): >2.04 mg/L
SENSITIZATION: (Guinea pigs): Not a contact sensitizer
ACUTE EFFECTS FROM OVEREXPOSURE: Corrosive. Causes irreversible eye damage. Vapors and mist can cause irritation. Ingestion may cause headache, dizziness, nausea, vomiting, gastrointestinal irritation, weakness and central nervous system depression.
SUBCHRONIC (TARGET ORGAN) EFFECTS: Repeated overexposure to phenoxy herbicides may cause effects to liver, kidneys, blood chemistry, and gross motor function. Rare cases of peripheral nerve damage have been reported, but extensive animal studies have failed to substantiate these observations, even at high doses for prolonged periods. Repeated overexposure to Dicamba may cause liver changes or a decrease in body weight.
CHRONIC EFFECTS FROM OVEREXPOSURE: Prolonged overexposure to phenoxy herbicides can cause liver, kidney and muscle damage.
CARCINOGENICITY: The International Agency for Research on Cancer (IARC) lists exposure to chlorophenoxy herbicides as a Class 2B carcinogen, the category for limited evidence for carcinogenicity in humans. However, more current 2,4-D lifetime feeding studies in rats and mice, as well as an MCPP lifetime feeding study in rats, did not show carcinogenic potential. The U.S. EPA has given 2,4-D and Dicamba a Class D classification (not classifiable as to human carcinogenicity).
Reproductive Toxicity: No impairment of reproductive function attributable to 2,4-D or MCPP have been noted in laboratory animal studies. Animal tests with Dicamba have not demonstrated reproductive effects.
Developmental Toxicity: Studies in laboratory animals with 2,4-D and MCPP have shown decreased fetal body weights and delayed development in the offspring at doses toxic to mother animals. Animal tests with Dicamba have not demonstrated developmental effects.
Genotoxicity: There have been some positive and some negative studies, but the weight of evidence is that neither 2,4-D nor MCPP is mutagenic. Animal tests with Dicamba have not demonstrated mutagenic effects.

IARC: Chlorophenoxy Herbicides – Class 2B
NTP: Not Listed
OSHA: Not Listed
OTHER: California Proposition 65: Not Listed

XII. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and non-target plants. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply when weather conditions favor drift from target area. Clean and rinse spray equipment using soap or detergent and water, and rinse thoroughly before reuse for other spraying. When cleaning equipment, do not pour the washwater on the ground; spray or drain over a large area away from wells and other water sources. Do not contaminate water when disposing of equipment washwaters. Do not apply this product through any type of irritation system. Do not contaminate domestic or irrigation waters.

Most cases of groundwater contamination involving phenoxy herbicides such as 2,4-D and MCPP-p have been associated with mixing/loading and disposal sites. Caution should be exercised when handling these herbicides at such sites to prevent contamination of groundwater supplies. Use of closed systems for mixing or transferring this pesticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.

In laboratory and field studies, TIPA salt of 2,4-D acid salt rapidly dissociated to parent acid in the environment. The typical half-life of the resultant 2,4-D acid ranged from a few days to a few weeks. Mecoprop-p DMA rapidly dissociates to parent mecoprop-p in the environment. In soil, mecoprop-p is microbially degraded with a typical half-life of approximately 11 to 15 days. Dicamba has low bioaccumulation potential, is not persistent in soil, is highly mobile in soil and degrades rapidly.

ECOTOXICOLOGICAL INFORMATION:

Data on TIPA Salt of 2,4-D Acid:

Bluegill Acute LC_{50}: 432 mg/l
Rainbow Trout Acute LC_{50}: 317 mg/l
Daphnia Acute LC_{50}: 748 mg/l
Pink Shrimp Acute LC_{50}: 733 mg/l
Tidewater Silverside Acute LC_{50}: 376 mg/;
Growth Inhibition EC_{50} Green Algae: 103 mg/l

Data on Mecoprop-p:

96-hour LC_{50} Bluegill: >100 mg/l (literature)
48-hour EC_{50} Daphnia: >270 mg/l (literature)
72-hour EC_{50} Green Algae: >270 mg/l (literature)

Data on Dicamba:

96-hour LC_{50} bluegill: 135 mg/l
96-hour LC_{50} Rainbow Trout: 135 mg/l
48-hour EC_{50} Daphnia: 110 mg/l
Bobwhite Quail 8-day Dietary LC_{50}: >10,000 ppm
Mallard Duck 8-day Dietary LC_{50}: >10,000 ppm

XIII. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS: Do not contaminate water, food or feed by storage or disposal.
Product: Pesticide wastes are toxic. If container id damaged or if pesticide has leaked, contain all spillage. Absorb and clean up all spilled material with granules or sand. Place in a closed, labeled container for proper disposal. Improper disposal of excess pesticide, spray mixtures, or rinsate is a violation of Federal law and may contaminate groundwater. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.
Container: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

XIV. TRANSPORTATION INFORMATION:

DOT Transportation:
≤ 21 gallons per completed package:
Not regulated
> 21 gallons per completed package:
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (2,4-Dichlorophenoxyacetic acid), 9, UN 3082, III

Marine Pollutant #1:
NA

Proper Shipping Name:
≤ 21 gallons per completed package:
Compounds, tree or weed killing (Herbicides),NOI, other than poison
Hazard Class:
> 21 gallons per completed package:
9
U.S. Surface Freight Class:
≤ 21 gallons per completed package:
20

HM 181 Shipping Name:
NA

ID NO.:
> 21 gallons per completed package:
UN 3082, III
Reportable Quantity (RQ):
> 21 gallons per completed package:
Acetic Acid, (2,4-Dichlorophenoxy) – (CAS #95-75-7) 100 lbs

XV. REGULATORY INFORMATION – UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):

SEC 311/312:
Y Immediate (Acute Health)
Y 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):
Acetic Acid, (2,4-Dichlorophenoxy) – (CAS #94-75-7), 25.38% equivalent by weight in product
Dicamba – (CAS #1918-00-0), 2.3% by weight in product
RCRA Waste Code: Acetic Acid, (2,4-Dichlorophenoxy) – (CAS #94-75-7), U240
CERCLA RQ:
Acetic Acid, (2,4-Dichlorophenoxy) – (CAS #94-75-7) 100 lbs
Dicamba – (CAS #1918-00-9) 1,000 lbs
CAA RQ: NA

EPA Registration No.: 228-409-10404

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

Preparation and distribution of this Material Safety Data Sheet is done for LESCO, Inc., pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200).

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