

Reg # 19713-251

PM-2

1974

ACCEPTED
Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 19713-251

Drexel Linuron DF HERBICIDE

ACTIVE INGREDIENT:
Linuron [3-(3,4-dichlorophenyl)-1-methoxy-1-methylurea] 50.0%
INERT INGREDIENTS: 50.0%
TOTAL: 100.0%

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

EPA Reg. No. 19713-251
EPA Est. No. 19713-MS-1

PRECAUTIONARY STATEMENTS

HAZARD TO HUMANS AND DOMESTIC ANIMALS
CAUTION! HARMFUL IF SWALLOWED. CAUSES EYE IRRITATION. MAY IRRITATE NOSE, THROAT AND SKIN.
Avoid breathing dust or spray mist. Avoid contact with skin, eyes and clothing. Wash thoroughly with soap and water after handling.

STATEMENT OF PRACTICAL TREATMENT
If in eyes: Flush with plenty of water. Get medical attention if irritation persists.
If on skin: Wash with plenty of water. Get medical attention if irritation persists.
If swallowed: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

ENVIRONMENTAL HAZARDS
Do not apply directly to water or wetlands. Do not contaminate water by cleaning of equipment or disposal of wastes.

FARM WORKER SAFETY STATEMENT
Do not enter treated areas without protective clothing until sprays have dried. Because certain states may require more restrictive re-entry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.
Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. Oral warnings must inform workers of areas or fields that may not be entered for 24 hours without specific protective clothing and appropriate actions to take in case of accidental exposure, as described under Precautionary Statements on this label. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. CAUTION. Area treated with Linuron on (date of application). Do not enter without appropriate protective clothing for 24 hours. In case of accidental exposure, flush eyes or skin with plenty of water. Call physician if irritation persists. Remove and wash contaminated clothing before reuse.
Required clothing and equipment for mixing/loading and applying Linuron: When mixing/loading and spraying wear a wide-brimmed hat, mid-forearm to elbow length chemical resistant gloves, and one-piece overalls which have long sleeves and long pants. Overalls should be constructed of flannel or denim as specified in the USDA/EPA Guide for Commercial Applicators.
Any article of clothing worn while applying product must be cleaned before reusing. Clothing which has been drenched or has otherwise absorbed concentrated pesticide must be disposed in a sanitary landfill, incinerated, or if allowed by State and local authorities, by burning.
Instead of clothing and equipment specified above, applicator may use an enclosed tractor cab which provides a filtered air supply (as described by Taschenburg and Bourke, 1975).
IMPORTANT—Injury to or loss of desirable trees or other plants may result from failure to observe the following:
Do not spray (except as recommended), or drain or flush equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots. Do not use on home plantings of trees, shrubs or herbaceous plants, nor on lawns, walks, driveways, tennis courts, or similar areas. Prevent drift of dry powder or spray to desirable plants. Do not contaminate any body of water. Keep from contact with fertilizers, insecticides, fungicides and seeds.
Thoroughly clean all traces of LINURON DF from application equipment immediately after use. Flush tank, pump, hoses, and boom with several changes of water after removing nozzle tips and screens (clean these parts separately).
GENERAL INFORMATION
Do not apply aerially.
LINURON DF Herbicide is a dispersible granule to be mixed in water and applied as a spray for selective control of weeds in certain crops and for non-selective weed control on non-cropland areas. It is non-corrosive to equipment, non-flammable and non-volatile.
LINURON DF is an effective preemergence treatment of soybeans, asparagus, carrots, corn, parsnips, potatoes, and sorghum for control of weeds listed below. LINURON DF is particularly effective in non-tilled soybean production. Treatment is made after planting but before emergence of soybeans. Weeds have usually emerged and the treatment controls susceptible weeds. Treatment also controls susceptible emerging weeds for an extended time.
LINURON DF may be sprayed postemergence over the top of emerged asparagus (before or after cutting) and to similar plants (carrots, castor bean) and celery transplants) to effectively control susceptible emerged seedling weeds.

Directed postemergence applications of LINURON DF, where spray nozzles are adjusted so that weeds are sprayed but the crop is not, may be used in emerged asparagus (larger forms), corn (field and sweet), cotton, sorghum and soybeans to effectively control susceptible emerged seedling weeds.
LINURON DF may be applied to soil prior to emergence of weeds to control susceptible weeds seedlings for an extended period of time; the degree of control and duration of effect will vary with:
Soil Organic Matter Content—High organic matter requires higher dosage than low organic matter for equivalent herbicide performance. Best results accompany preemergence use of LINURON DF on soils of 1% to 3% organic matter. The combination of LINURON DF plus metribuzin DF Herbicide (or metribuzin 4L Herbicide) provides most effective preemergence weed control on soils from 1% to 4% organic matter content.
Soil Texture—High clay content requires higher dosage rates than those with less clay. Best results accompany preemergence use of LINURON DF on coarse to medium soils.
Rainfall—Moisture is required to activate the chemical following preemergence application to soil. Best results accompany rainfall (or irrigation) that occurs within 2 weeks of application. In the Columbia River Basin, LINURON DF only if the crop is sprinkler irrigated.
Weed Species And Conditions of Growth—Species vary in susceptibility and may be more difficult to control when under stress.
LINURON DF is recommended for use in conjunction with certain other herbicides for treatment of field corn, potatoes, sorghum, and soybeans; observe all cautions and limitations on labeling of all products used in mixtures.
Since the effect of LINURON DF varies with soils, crop varieties, uniformity of application, and environmental conditions, it is suggested that growers limit their first use to small areas.
PREEMERGENCE USE (germinating weeds): LINURON DF, at recommended rates, controls annual weeds such as:

Broadleaf Weeds	Grasses
Florida beggarweed	Barryardgrass
Carpetweed	(watergrass)
Chickweed	Canarygrass
Common dayflower	Crabgrass
Florida purslane	Foxtails
(Florida pusley)	(including giant)
Galinoga	Goosegrass
Lambsquarters	Fall panicum
(Pennsylvania)	

Partial Control
Cocklebur (common)
Annual morningglory
Prickly sida (leafweed)
Sicklepod
Velvetleaf (buttonweed)
LINURON DF will not control established perennials such as bermudagrass, Canada thistle, field bindweed, johnsongrass and purple nutsedge. The lower dosage rates are effective on coarser soils and the higher rates on finer soils and on the more resistant seedling weeds. Sufficient moisture (1/4 to 1" on moist soils; 1" to 2" on dry soils) in the form of rainfall or sprinkler irrigation is necessary after treatment to carry the chemical into the root zone of germinating weeds; best results are obtained when this occurs within two weeks after application. If heavy rainfall occurs soon after application, injury to crop may result.
LINURON DF applied preemergence, before emergence of soybeans, asparagus, carrots, corn (field), parsnips, potatoes, and sorghum, and weeds, is an effective procedure because susceptible weeds are controlled in an early, vulnerable seedling stage before they compete with the crop. With favorable moisture conditions, LINURON DF continues to control weeds for some time as the crop becomes better able to compete. Should weed seedlings begin to break through the preemergence treatment in significant numbers, secondary weed control procedures should be implemented; these include cultivation and postemergence herbicide application.
A good seed bed must be prepared before application of LINURON DF as crop injury may result if application is made to ground which is cloddy or compacted resulting in improper planted seed. Plant seed to depth specified. Surface of the soil should not be cultivated or disturbed after application of LINURON DF and before emergence of the crop; as weed control may be reduced and crop injury may result. However, if moisture is insufficient to activate the herbicide, a shallow cultivation (rotary hoe preferred) should be made after emergence of row crops while weeds are small enough to be controlled by mechanical means. Deep cultivation reduces the effectiveness of LINURON DF.
Note: Consult chloramben, atrazine, Bronco, metolachlor, alachlor, paraquat, propazine, pendimethalin, proachlor, glyphosate, oryzalin, and trifluralin labels for additional weeds controlled when LINURON DF is used in conjunction with these herbicides.

POSTEMERGENCE USE (Emerging Seedling Weeds): LINURON DF, at recommended rates, controls weeds such as:

Broadleaf Weeds	Grasses
Annual morningglory	Lambsquarters
Carpetweed	Mustards
Cocklebur (common)	Nettleleaf goosefoot
Common dayflower	Pigweeds
Common ragweed	Prickly sida
Dog fennel	(leafweed)
Fiddleneck	Purslane (common)
(amsinckia)	Sesbania
Florida beggarweed	Sicklepod
Florida purslane	Smartweed (Pennsylvania)
(Florida pusley)	Velvetleaf
Groundsel	(buttonweed)
Knawel	Wild buckweed

Results of postemergence treatment of emerged weeds vary with rate applied and environmental conditions; best results are obtained on succulent weeds growing under conditions of high humidity and temperatures of 70°F or higher. Addition of a surfactant such as Surf-Ac 820 to the spray (where recommended) increases contact effects of LINURON DF. Application will also provide control of emerging susceptible weed seedlings for an extended period of time.
Note: Consult bromoxynil and 2,4-DB labels for additional weeds controlled when LINURON DF is used in conjunction with these herbicides. Best results are obtained under conditions of high humidity and temperatures over 70°F. Control of emerged weeds under drought stress is usually impractical.

DIRECTIONS FOR USE
It is a violation of federal law to use this product in a manner inconsistent with its labeling. Do not apply this product through any type of irrigation system.
LINURON DF Herbicide should be used only in accordance with recommendations on this label, or in separate published recommendations available through local dealers. Do not use on any crop in Kern County, California, except carrots when a permit has been obtained from the Agricultural Commission. Fill tank 1/4 full with water. Start agitation system; add LINURON DF, and continue adding water. Add separately each additional component of any tank mix while adding water. If a surfactant is used, add it last when the tank is nearly full. Continue agitation throughout. If poor mixing should occur with any component, premix the component with two parts of water before adding to the spray tank.
Fertilizer Spray Mixtures—For preemergence application, nonpressure nitrogen or fertilizer solution may be used in the spray mixture unless otherwise directed. Small quantities should be tested for compatibility by the following procedure before full scale mixing:

Manufactured By
Drexel Chemical Company
P.O. BOX 9306 MEMPHIS, TN 38109-0306

BEST AVAILABLE COPY

- Mix 2 tablespoons LINURON DF with 2 tablespoons of water; mix thoroughly and add to fertilizer solution.
- Close jar and shake well.
- If other herbicides are to be used in the mixture, premix 2 tablespoons of wettable powders or 1 teaspoon of liquids with 2 tablespoons of water; add to LINURON DF fertilizer mixture.
- Close jar and shake well.
- Watch mixture for several seconds; check again in 30 minutes.
- If mixture does not separate, foam, gel, or become lumpy, it may be used.
- Mixing ability may be improved by adding compatibility agents such as Kalo Laboratories "Comox" or Witco Chemicals "Sponto" 168d. Follow directions on container.

If the mixture is compatible, prepare spray by adding the fertilizer solution to the spray tank with agitator running. For tank mixtures with other herbicides, follow directions above.

Equipment—Spray Volume and Pressure. Application is limited to a ground boom sprayer properly calibrated to a constant speed and rate of delivery. Openings in screens should be equal to or larger than 50 mesh. Continuous agitation in the spray tank is required to keep the material in suspension. Agitate by mechanical or hydraulic means; if bypass or return line is used, it should terminate at bottom of tank to minimize foaming. Avoid overlapping and shut off spray booms while starting, turning, slowing or stopping, or injury to the crop may result.

For preemergence application, use 20 to 60 gals per acre and spray pressure of 30 to 40 psi.

For postemergence application, use sufficient volume (min. 20 gals per acre) for thorough coverage of weed foliage; use spray pressure of 20 to 25 psi to keep spray drift to a minimum.

Use Rates: All rates of LINURON DF (and tank mixtures) are expressed as broadcast rates; for band treatment, use proportionately less. For example, use 1/2 of the broadcast rate when treating a 14" band where row spacing is 42". Where a range of dosages is given, use the lower rate on coarser soils (low in clay or organic matter) and the higher rate on finer soils (high in clay or organic matter); for postemergence application, use the lower rate on smaller weeds and the higher rate on larger weeds.

Soil Limitations: Unless otherwise directed, do not use on sand, loamy sand, gravelly soils or exposed subsoils nor on soils containing less than 1% organic matter as injury to the treated or subsequent crops may result.

Replanting: If initial seeding fails to produce a stand, crops registered for the rate of LINURON DF that has been applied may be replanted into the treated area. Thoroughly rework soil before replanting. Do not retreat during the same crop year as injury to the crop may result.

Crop Rotation Recommendations: Unless otherwise directed, any crop may be planted after 4 months except for cereals where only barley, oats, rye and wheat may be planted.

West of Rocky Mountains: Carrots or celery may be planted 4 months after last application; do not plant any other crop until 1 year after the last application.

CROP USES

ASPARAGUS

CALIFORNIA (Includes control of dudain melon and nightshade).

Direct Seeded or Newly Planted Crows—Do not exceed 4 lbs total per acre per season; do not use surfactant or fertilizer solution in spray mixture.

Preemergence Application: Make a single application of 2 to 4 lbs per acre after planting seed 1/2" deep in fine soils. During planting operation, spray activated charcoal ("AquaNo-Char" or "Gro-Safe") as a 1" band on soil surface directly over seed rows at the rate of 300 lbs. per acre (equivalent to 15 lbs per acre of crop with 20" row spacing).

Postemergence Application: Make 1 or 2 applications of 1 to 2 lbs per acre when ferns are in 6" to 18" stage and weeds are not over 4" tall.

Established Beds: Do not apply within 1 day of harvest; do not exceed 8 lbs total per acre per season; do not use surfactant or fertilizer solution in spray mixture. Do not reenter treated areas for 24 hours following application unless protective clothing is worn.

Preemergence Application: Make a single application of 2 to 4 lbs per acre.

Postemergence Application: Make 1 to 4 applications of 1 to 2 lbs per acre before weeds exceed 4" in height. Apply before cutting season or immediately after cutting. Do not reenter treated areas for 24 hours following application unless protective clothing is worn.

Directed Postemergence Application (Form Stage): Make a single application of 4 to 8 lbs per acre as directed spray to base of plants for control of dudain melon.

Note: If more than 4 lbs LINURON DF per acre is applied per season, do not plant any other crop until 1 year after last application. See "Replanting." Do not reenter treated areas for 24 hours following application unless protective clothing is worn.

*Preemergence weed control will be reduced in soils with high organic matter (greater than 5% and peat or muck.)

CARROTS

Preemergence Application—Florida, Michigan and Wisconsin: Make a single application of 1 to 2 lbs per acre in Florida and 1 to 3 lbs per acre in Michigan and Wisconsin; apply after planting but before carrots emerge; plant seed at least 1/2" deep. Use the lower rate on lighter soils (low in clay or organic matter) and higher rate on heavier soils (high in clay or organic matter). Subsequent postemergence application may be made provided the total does not exceed 4 lbs LINURON DF per acre per season.

Postemergence Application—U.S.: Apply 1 1/2 to 3 lbs per acre as a non-directed spray after carrots are at least 3" tall. Apply before annual grasses exceed 2" in height and before broadleaf weeds exceed 6" in height. Repeat application may be made but do not exceed 4 lbs LINURON DF per acre (West of Rocky Mountains, do not exceed 3 lbs LINURON DF per acre). Do not exceed 40 psi spray nozzle pressure as crop injury may result.

LINURON DF may be applied following an application of Stoddard solvent provided treatments are at least one day apart. Stoddard solvent may be applied following application of LINURON DF provided treatments are at least 2 weeks apart. Shorter time intervals between applications may result in injury to the crop. Do not apply LINURON DF as a tank mixture with Stoddard solvent, surfactants, nitrogen or fertilizer solution, other pesticides, nor when temperature exceeds 85°F as crop injury may result. **Note:** Because carrot varieties vary in their resistance, determine tolerance to LINURON DF prior to adoption as a field practice to prevent possible crop injury; do not treat susceptible varieties which show an initial burning of foliage following postemergence treatment with LINURON DF. Do not reenter treated areas treated postemergence for 24 hours following application unless protective clothing is worn. See "Replanting." Do not apply within 14 days of harvest.

CELERY

West of the Rocky Mountains only—Post-transplant Application: Make a single application of 1 1/2 to 3 lbs per acre. Apply as a non-directed spray after celery is transplanted and established, but before celery is 8" tall. Apply before annual grasses exceed 2" in height and before broadleaf weeds exceed 6" in height. In the northeast, use only on celery grown on muck soils.

Do not exceed 40 psi spray nozzle pressure, and do not apply when temperature exceeds 85°F, nor as a tank mixture with surfactants, nitrogen or fertilizer solution, or other pesticides as injury to the crop may result. Do not reenter treated areas for 24 hours following application unless protective clothing is worn. See "Replanting." Do not apply within 14 days of harvest.

CORN (FIELD)

Preemergence Application—East of Rocky Mountains: Select one of the treatments for application as a tank mixture. Make a single application after planting but before corn emerges. Plant seed at least 1 1/2" deep on flat or raised seed beds only or injury to the crop may result. Do not spray over top of emerged corn.

LINURON DF at 1/2 to 1 lb per acre (tank mixed with standard registered herbicides for corn) on (mache-resistant) lambsquarters on soils of 1 to 4% organic matter east of the Rocky Mts.

Soil Texture	Product Per Acre	
	1 to 3% Organic Matter LINURON DF + alachlor (lbs) (qts)	3 to 6% Organic Matter LINURON DF + alachlor (lbs) (qts)
Coarse Sandy Loam	1/2 to 1 1/4 + 1/2 to 1	1 1/4 to 2 + 1 to 1 1/2
Medium Loam, Silt loam, silt, Sandy clay, Sandy clay loam	1 to 1 1/2 + 1 to 1 1/2	1 1/2 to 2 1/2 + 1 1/2 to 2
Fine Silty Clay, Silty Clay loam, Clay, Clay loam	1 1/4 to 2 + 1 1/2 to 2	2 to 3 + 2 to 2 1/2

Replanting: Corn or soybeans may be replanted within 4 months. See "Replanting."

Soil Texture	Product Per Acre	
	1 to 3% Organic Matter LINURON DF + propanilol (lbs) (qts)	3 to 6% Organic Matter LINURON DF + propanilol (lbs) (qts)
Coarse Sandy Loam	1/2 to 1 1/4 + 1 1/2 to 2	1 1/4 to 2 + 2 1/4 to 3 1/4
Medium Loam, Silt loam, silt, Sandy clay loam	1 to 1 1/2 + 1/2 to 1	1 1/2 to 2 1/2 + 1 to 2 1/2
Fine Silty clay, Silty Clay loam, Clay, Clay loam	1 1/2 to 1 1/2 + 1/2 to 1	1 1/2 to 3 + 1 to 2 1/2

Replanting: Corn may be replanted after 4 months. See "Replanting."

LINURON DF + atrazine (Tank Mixture)

For improved control of annual grasses, add alachlor as recommended on alachlor labeling for alachlor/ atrazine combinations.

Soil Texture	Product Per Acre	
	1 to 2% Organic Matter LINURON DF + atrazine 80% (lbs) (lbs)	2 to 5% Organic Matter LINURON DF + atrazine 80% (lbs) (lbs)
Coarse Sandy Loam	1/2 to 1 + 1/4 to 1/2	1 to 2 + 1/4 to 1 1/4
Medium Loam, Silt, Sandy clay, Sandy clay loam	1 to 1 1/2 + 1/2 to 1	1 1/2 to 3 + 1 to 2
Fine Silty clay, Silty clay loam, Clay, Clay loam	1 1/2 to 1 1/2 + 1/2 to 1	1 1/2 to 3 + 1 to 2

Corn may be replanted within 4 months; after 4 months, see "Replanting."

CORN (FIELD AND SWEET)

Directed Postemergence Application: Make a single application as a directed spray after corn is at least 15" high (measured to the highest leaf surface on free standing plants). Do not spray over top of corn. Apply only when there is sufficient differential between height of corn and weeds so that the directed spray thoroughly covers all weed foliage without contact of upper leaves or whorl of corn by spray or drift, as such contact may cause crop injury. Early cultivation (rotary hoe or other suitable equipment) will aid in achieving proper differential between height of corn and weeds. Use 1 1/2 lbs per acre; add 1 pint Surf-Ac 820 for each 25 gals spray mixture. For field corn, a nitrogen solution may be substituted for all or part of the water. Use the lower rate on lighter soils (low in clay or organic matter) and when weeds do not exceed 2" in height; use the higher rate on heavier soils (high in clay or organic matter) for weeds up to 5" in height. Do not reenter treated areas for 24 hours following application unless protective clothing is worn. See "Replanting."

COTTON (East of Rocky Mountains only)

Directed Postemergence Application: Apply as directed sprayed just before cotton emerges. Apply as a directed spray after cotton is at least 8" tall and emerged weeds do not exceed 2" in height; add 1 pint Surf-Ac 820 for each 25 gals spray mixture. If needed, a second application at same rate may be made one week or later after initial treatment. Alternatively, after cotton is 20" tall, make a single application of 2 to 3 lbs per acre following last cultivation; if emerged weeds are present, add Surf-Ac 820 as directed above. **Note:** Do not use on Pima varieties of cotton. Do not spray treated fields or feeds forage from treated areas to livestock. Do not feed gun trash to livestock. Do not reenter treated areas for 24 hours following application unless protective clothing is worn. See "Replanting."

PARSNIPS

Preemergence Application: Make a single application of 1 1/2 to 3 lbs per acre. Apply after planting but before crop emerges. Plant seed at least 1 1/2" deep. See "Replanting."

POTATOES (East of Rocky Mountains only)

Apply 1 1/2 to 2 1/2 lbs per acre on the coarser soils (sandy loams, silt loams; 1 to 2% organic matter) and 2 1/2 to 4 lbs per acre on finer soils (silt, clay loams; 2 to 5% organic matter); on soils over 5% organic matter, use 4 lbs per acre and apply to emerged weeds (before potatoes emerge).

Wisconsin—Central Sands Area: Apply 1 lb per acre on sands and 2 lbs per acre on loamy sands. **Northwest:** For improved control of annual grasses (see metolachlor labeling), apply.

Preemergence Application: Make a single application as a broadcast spray after planting but before crop emerges. Plant seed at least 2" deep. Do not spray over top of emerged potatoes. If beds are to be "dragged" and/or "hilled," apply after the final "dragging" or "hilling" operation. Apply before grasses are 2" tall and before broadleaf weeds are 6" tall, preferably just before or when weed seedlings emerge. If emerged weeds are present, add 1 pint Surf-Ac 820 for each 25 gals spray mixture. In irrigated areas, best results are obtained when application is made to moist soil, followed within 2 weeks by 1" to 2" of sprinkler irrigation (or rainfall). On powder dry soils, irrigate prior to herbicide application and follow with sprinkler irrigation to activate the herbicide.

Soil Texture	1 to 3% Organic Matter LINURON DF + metolachlor 6E (lbs)	3 to 6% Organic Matter LINURON DF + metolachlor 6E (lbs)
Coarse Sandy lo. n	1 to 1½ + 1½	1½ to 2 + 2
Medium Loam, Silt loam, Silt, Sandy clay, Sandy clay loam	1½ to 2 + 2	2 to 2½ + 2½ to 3

See Replanting.

SORGHUM

Preemergence Application: Select one of the following herbicide treatments for application as a tank mixture. Make a single application after planting but before crop emerges. Plant seed at least 1" deep on flat or raised seedbeds only or injury to the crop may result. Do not spray over top of emerged sorghum.

LINURON DF + propachlor—Great Plains

Soil Texture	Product Per Acre	
	1 to 3% Organic Matter LINURON DF + propachlor (4 lbs/gal) (lbs)	3 to 6% Organic Matter LINURON DF + propachlor (4 lbs/gal) (lbs)
Coarse Sandy loam	½ to 1½ + 1½ to 2½	1½ to 2 + 2½ to 3½
Medium Loam, Silt loam, Silt, Sandy clay, Sandy clay loam	1 to 1½ + 2 to 5½	1½ to 2½ + 3½ to 5½
Fine Silty clay, Silty clay loam, Clay, Clay loam	¾ to 2 + 2½ to 3½	2 to 3 + 3½ to 6½

Note: Do not graze or feed sorghum forage or silage from treated fields to dairy animals. Replanting: Sorghum or field corn may be replanted within 4 months; after 4 months, see "Replanting."

Directed Postemergence Application: Make a single application of LINURON DF as a directed spray; add 1 pint Surf-Ac #20 for each 25 gals spray mixture. If sprayer is equipped with skids, shoes or shields, apply 1 lb per acre when sorghum is 12" tall (free standing plants) and weeds are up to 2" in height. Use 1 to 2 lbs per acre when sorghum is 15" tall and weeds are 2" to 4" in height. If boom drops are used, apply 1 to 2 lbs per acre when sorghum is at least 18" tall and weeds are 2" to 4" in height. Apply only when there is sufficient differential between height of sorghum and weeds so that the directed spray thoroughly covers all weed foliage without contact of upper leaves or whorl of sorghum by spray or drift as such contact may cause crop injury.

Note: Do not graze or feed plants to livestock within 3 months after postemergence application. See "Replanting." Do not reenter treated areas for 24 hours following application unless protective clothing is worn.

SOYBEANS—CONVENTIONAL TILLAGE

Preemergence Application: For broad spectrum weed control, select one of the following herbicide combination treatments and make a single application after planting but before crop emerges. Plant seed at least 1-3/4" deep on flat or raised seedbeds only or injury to the crop may result. Injury to soybeans may result if application is made to fields with standing water or fields too wet to cultivate. Do not spray over top of emerged soybeans. Do not use on sand or loamy sand nor any soil containing less organic matter than listed below.

LINURON DF + metribuzin DF*

For control of common ragweed, hemp sesbania, jimsonweed, lambsquarters, pigweeds, prickly sida, sicklepod, velvetleaf, spotted spurge, Venice mallow, purslane, carpetweed, Pennsylvania smartweed, and partial control of cocklebur*, use the following:

Soil Texture	Product Per Acre	
	½ to 3% Organic Matter LINURON DF + metribuzin DF (lbs)	3 to 6% Organic Matter LINURON DF + metribuzin DF (lbs)
Coarse Sandy loam	½ to ½ + ½ to ½	½ to 1½ + ½ to ½
Medium Loam, Silt loam, Silt, Sandy clay, Sandy clay loam	½ to ¾ + ½ to ½ or (metribuzin 4L—½ to ½ pt)	¾ to 1½ + ½ to ½ or (metribuzin 4L—½ to ½ pt)
Fine Silty clay, Silty clay loam, Clay, Clay loam	¾ to 1½ + ½ to ½ or (metribuzin 4L—½ to ½ pt)	1½ to 2 + ½ to ½ or (metribuzin 4L—½ to 1 pt)

*For improved control of annual grasses, tank mix with alachlor or metolachlor (per labeling).

Herbicide Alachlor
Replanting/Restrictions
Soybeans or field corn may be replanted within 4 months; after 4 months, see "Replanting." Treated vines may be grazed or fed to livestock 60 days after application.

or
Metolachlor
Soybeans or field corn may be replanted within 4 months, for rotation crops, see "Replanting" and follow instructions on metolachlor label. Do not graze or feed forage from treated areas to livestock.

Note: Soybean varieties such as Altona, Coker 102 and 156, Govan, NKS 1884, Semmes, Tracy, Vansoy, Terra Vig 505 and 606, Agropor 55, Asgrow 6520, Maple Amber, Portage, Vinlon 81, and AP 71 are sensitive to metribuzin. Injury may occur if metribuzin is used on these varieties. Before use on any other soybean variety, tolerance to metribuzin must first be determined. Varieties showing above average tolerance to metribuzin must first be determined. Varieties showing above average tolerance to metribuzin are Americana Revere, Asgrow 1937, Asgrow 3659, Asgrow 3860, DSR 171, DSR 27, Essex, Fayette, Hsroy 176, Lakota, Lawrence, LQ 4207, NKS 1492, Pride 8216, Pride 8242, SRF 250 SRF 350, P. Union, Wayne, Wells II and Williams 82; for maximum weed control, use the higher rate (where a range of rates is listed) for the appropriate soil type and organic matter as shown in the following tables. Injury to soybeans may occur if metribuzin is used on soils having a calcareous surface layer or pH of 7.5 or higher, or if used in conjunction with soil applied organic phosphate pesticides such as chlorpyrifos, disulfoton, ethionphos, fenamiphos, fenbutathion, parathion, phorate or terbufos. Injury may occur if atrazine was applied on the soil the year before use of metribuzin. Seeding disease,

concentration, or drought may weaken soybean seedlings and increase possibility of crop injury. Do not use on sand or loamy sand. Cultivation after planting: Treated soil may be shallow-cultivated, rotary-hood, or hand-hood without reducing the weed control activity of the tank mixture. Do not cultivate deeper than the treated layer of soil since this may bring untreated soil to the surface and poor weed control may result. Replanting: If initial seeding fails to produce a stand, treated fields may be replanted to soybeans; do not rework soil; do not retreat field with a second application as injury to crop may result. Do not replant treated areas to any crop other than soybeans within four months after treatment as injury to subsequent crops may result. See "Replanting."

Soil Texture	Product Per Acre	
	½ to 3% Organic Matter LINURON DF (lbs)	3 to 6% Organic Matter LINURON DF (lbs)
Coarse Sandy loam	½ or 1½	1½ to 2
Medium Loam, Silt loam, Silt, Sandy clay, loam	1 to 1½	1½ to 2½
Fine Silty clay, Silty clay loam, Clay, Clay loam	1½ to 2	2 to 3

Herbicide alachlor
Replanting/Restrictions
Soybeans or field corn may be replanted within 4 months; after 4 months, see "Replanting."

or
metolachlor
Soybeans or field corn may be replanted within 4 months; for rotation crops, see "Replanting" and follow instructions on metolachlor label. Do not graze or feed forage from treated areas to livestock.

or
Pendimethalin
Soybeans or field corn may be replanted within 4 months; for rotation crops, see "Replanting" and follow instructions on metolachlor label. Do not graze or feed forage from treated areas to livestock.

or
oryzalin
Soybeans or field corn may be replanted within 4 months; after 4 months, see "Replanting" but do not plant potatoes within 12 months. Do not use treated vines for feed or forage.

or
chloramben
Soybeans or field corn may be replanted within 4 months; after 4 months, see "Replanting."

For control of black nightshade, apply:

Soil Texture	Product Per Acre	
	1 to 3% Organic Matter LINURON DF (lbs)	alachlor (lbs)
Coarse Sandy loam	¾ to 1½	2
Medium Loam, Silt loam, Silt, Sandy clay, Sandy clay loam	1 to 1½	2½ to 3
Fine Silty clay, Silty clay loam, Clay, clay loam	1½ to 2	3

Do not use on sand or loam sands. Replanting: Soybeans or field corn may be replanted within 4 months; after 4 months, see "Replanting." For control of black nightshade in Kentucky, Illinois, Indiana and Ohio:

Soil Texture	Product Per Acre	
	1 to 3% Organic Matter LINURON DF (lbs)	metolachlor 6E (lbs)
Coarse Sandy loam	¾ to 1½	1½
Medium Loam, Silt loam, Silt, Sandy clay, Sandy clay loam	1 to 1½	2
Fine Silty clay, Silty clay loam, Clay, Clay loam	1½ to 2	2 to 2½

Do not use on sand or loam sands. Replanting: Soybeans or field corn may be replanted within 4; after 4 months, see "Replanting." Preemergence Following trifluralin or pendimethalin Preplant: Where trifluralin or pendimethalin has been used as a preplant incorporated treatment (according to directions on product label), apply LINURON DF preemergence (after planting and before emergence of soybeans) as a separate operation using rates recommended below for LINURON DF alone. For rotation crops, follow instructions on trifluralin or pendimethalin labels and see "Replanting." Plant seed at least 1½" deep on flat or raised seedbeds only or injury to the crop may result. Injury to soybeans may result if application is made to fields with standing water or fields too wet to cultivate. Do not spray over top of emerged soybeans. Do not use on sand or loamy sand nor any soil containing less organic matter than listed below. LINURON DF Alone—If weeds have emerged, add 1 pint Surf-Ac #20 for each 25 gals spray mixture.

Soil Texture	Pounds LINURON DF Per Acre	
	½ to 2% Organic Matter	2 to 5% Organic Matter
Coarse Sandy loam	1 to 1½	1½ to 3
Medium Loam, Silt loam, Silt Sandy clay, Sandy clay loam	1½ to 2½	2½ to 4
Fine Silty clay, Silty clay loam, Clay, Clay loam	1½ to 2½	2½ to 5 (over 5% organic matter, use 6 lbs)

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Replanting: Soybeans or field corn may be replanted within 4 months; after 4 months, see "Replanting."

Preemergence Followed by Postemergence (Directed) Applications: Both preemergence and postemergence (directed to weeds with minimum contact with soybean plants) treatment may be required for control of:

Annual Morningglory—LINURON DF preemergence (any combination listed) followed by a directed postemergence spray of LINURON DF + 2,4-DB.

Broadleaf Signalgrass—LINURON DF + metribuzin DF preemergence followed by a directed postemergence spray of LINURON DF, if needed.

Cocklebur (common)—LINURON DF + metribuzin DF preemergence followed by a directed postemergence spray of LINURON DF + 2,4-DB.

Hemp sesbania—LINURON DF + metribuzin DF preemergence followed by a directed postemergence application of LINURON DF, if needed.

Prickly sida—LINURON DF + metribuzin DF preemergence followed by a directed postemergence spray of LINURON DF, if needed.

Velvetleaf—LINURON DF + metribuzin DF preemergence followed by a directed postemergence application of LINURON DF, if needed.

Other weeds—Directed postemergence application of LINURON DF should be used as a backup treatment for listed preemergence treatments and will extend the duration and degree of weed control obtained with preemergence treatment. Postemergence treatment should be used only as needed.

For dosage rates, refer to "Preemergence" and "Directed Postemergence" sections under "Soybeans."

SOYBEANS—MINIMUM OR NO-TILLAGE

Preemergence to Soybeans Postemergence to Weeds: LINURON DF preemergence to soybeans may be used for preemergence and postemergence control of many broadleaf weeds and grasses where soybeans will be planted directly into a prepared bed (stale seed bed), cover crop or in previous crop residues such as corn or small grain stubble. Apply with ground equipment immediately before, during or after planting but before crop emergence; maintain constant agitation of spray mixture.

Soil Texture	Pounds LINURON DF Per Acre	
	1/4 to 2% Organic Matter	2 to 5% Organic Matter
Coarse Sandy loam	1 to 1 1/2	1 1/2 to 3
Medium Loam, Silt loam, Silt Sandy clay, Sandy clay loam	1 1/4 to 2 1/4	2 1/4 to 4
Fine Silty clay, Silty clay loam, Clay, Clay loam	1 1/2 to 2 1/2	2 1/2 to 5 (over 5% organic matter, use 6 lbs)

Replanting: Soybeans or field corn may be replanted within 4 months; after 4 months, see "Replanting."

If small seeding weeds are present, add 1 pint Surf-Ac 820 for each 25 gals glyphosate or Bronco as described under these combinations; these treatments will also suppress some perennial weeds.

LINURON DF + atachlor or metolachlor 8E or oryzalin—will improve control of grasses and volunteer small grains.

LINURON DF + atachlor* (or metolachlor* or oryzalin*) + paraquat or glyphosate—Thoroughly mix LINURON DF and companion herbicide in spray tank first according to directions; then add paraquat, or glyphosate as directed under paraquat combinations or glyphosate combinations;

Soil Texture	Product Per Acre	
	1 to 3% Organic Matter LINURON DF + atachlor (lbs) (lbs)	3 to 6% Organic Matter LINURON DF + atachlor (lbs) (lbs)
Coarse Sandy Loam	1/4 to 1 1/2 + 2	1 1/2 to 2 1/2 + 2 1/2
Medium Loam, Silt Loam, silt, Sandy clay, Sandy clay loam	1 1/4 to 2 + 2 1/2	2 to 3 + 3
Fine Silty Clay, Silty Clay loam, Clay, Clay loam	1 1/2 to 2 + 2 1/2	2 1/2 to 3 1/2 + 3

*For improved control of annual grasses and volunteer small grains, add as per labeling:

Herbicide **Replanting/Restrictions**
alachlor Soybeans or field corn may be replanted within 4 months; after 4 months, see "Replanting."

or
metolachlor Soybeans or field corn may be replanted within 4 months for rotation crops, see "Replanting" and follow instructions on metolachlor label. Do not graze or feed forage from treated areas to livestock.

or
oryzalin Do not use treated vines for feed or forage. Soybeans may be replanted within 4 months; after 4 months, see "Replanting" and do not plant potatoes within 12 months.

For control of black nightshade apply with paraquat or glyphosate as shown below:

Soil Texture	Product Per Acre	
	1 to 3% Organic Matter LINURON DF (lbs)	alachlor (lbs)
Coarse Sandy loam	3 1/4 to 1 1/2	2
Medium Loam, Silt loam, Silt, Sandy clay, Sandy clay loam	1 to 2	2 1/4 to 3
Fine Silty clay, Silty clay loam, Clay, Clay loam	1 1/4 to 2 1/4	3

Replanting: Soybeans or field corn may be replanted within 4 months; after 4 months see "Replanting."

Paraquat combinations—Select and tank mix in water one of the above treatments; then add 1 to 2 pints paraquat (2 lbs active per gal) per acre for control of emerged weeds. Use the higher rate for weeds 4" to 6" tall. As the last ingredient, add 1/2 pint Surf-Ac 820 or other spreader per 100 gals of spray mixture. Maintain constant agitation. Use 20 to 60 gals of water per acre. Use the higher gallonage for dense stubble or vegetation.

Glyphosate combinations—Select and tank mix one of the above treatments. As last ingredient, add 1 1/4 quarts of glyphosate per acre for control of emerged annual weeds or 2 to 4 quarts per acre for control of emerged perennial and annual weeds. Use 20 to 30 gals of water per acre.

LINURON DF + Bronco—Do not add paraquat or glyphosate to this combination. Mix LINURON DF with water in the spray tank as directed on the package label and then add Bronco to the dilute mix. Maintain constant agitation. Use 20 to 30 gals water per acre.

Soil Texture	Product Per Acre
	1/4 to 5% Organic Matter
Coarse Sandy loam	1/4 to 2 + 3/4 to 5
Medium Loam, Silt loam, Silt, Sandy clay Sandy clay loam	1 1/4 to 2 1/4 + 3/4 to 5
Fine Silty clay, Silty clay loam, clay Clay loam	1 1/4 to 3 + 4 to 5

(a) Do not use on soils with less than 1% organic matter nor on sand, loamy sand, or muck soils as crop injury may result.

(b) Use the higher rate for dense stubble, heavy crop residue, or heavy weed population.

Replanting Soybeans: If initial seeding fails to produce a stand, treated fields may be replanted to soybeans; do not rework soil; do not retreat field with a second application as injury to the crop may result. Do not replant treated areas to any crop other than soybeans within four months after treatment as injury to subsequent crops may result. See "Replanting."

SOYBEANS—CONVENTIONAL OR MINIMUM OR NO-TILLAGE

Directed Postemergence Application: Apply LINURON DF alone or as a tank mixture with 2,4-DB, as directed spray to cover weed foliage with minimum contact of the soybean plant. Do not spray higher than 3" on the soybean stem or crop injury may result. Do not spray over top of soybean plants. For

last application, use a single flood-type spray nozzle ("K" series or equivalent) per middle mounted on an oiling shoe or gauge wheel. For band treatment, use two nozzles per row mounted on an oiling shoe or gauge wheels, one on each side of row. To avoid spray drift, which may cause crop injury, do not exceed nozzle pressure of 25 psi nor use nozzles tips smaller than 8002 T-Jet (or equivalent) and do not spray under windy conditions. Add 1 pint Surf-Ac 820 for each 25 gals spray mixture. For best results, use a preemergence treatment (such as LINURON DF) or cultivation to control early weed growth and to increase the differential between height of soybeans and weeds.

Note: Do not use on soils with less than 1% organic matter. Do not apply more than 2 lbs LINURON DF per acre per season for postemergence treatments. Do not apply within 60 days of harvest. Do not feed soybean forage or hay to livestock from fields treated postemergence. Harvested soybeans may be used for food, feed or oil purposes. See "Replanting." Do not reenter treated areas for 24 hours following application unless protective clothing is worn.

LINURON DF Alone—For soybeans at least 8" high and when weeds do not exceed 2" in height, apply 1 1/2 to 1 lb per acre. Make a second application at same rate if new flush of weeds occur.

For soybeans at least 12" high and when weeds do not exceed 4" in height, make a single application of 1 to 2 lb per acre. Alternatively, make a split application of 1 lb per acre followed by a second application at the same rate after 1 week or later.

LINURON DF + 2,4-DB—For soybeans at least 8" high and when weeds do not exceed 4" in height, apply 1 1/2 LINURON DF plus 1/2 lb 2,4-DB (13 fl oz "Butylac" 200 or 1 pint "butozone") per acre. A second application may be made if needed, but do not make more than 2 applications per season.

NON-CROP WEED CONTROL

For short-term control of annual weeds on non-cropland areas such as roadsides and fence rows—apply 2 to 6 lbs LINURON DF per acre in 40 to 100 gals of water. For best results, apply shortly before weed growth begins or at early seedling stage of growth. For control of established annual weeds, add Surf-Ac 820 at rate of 2 qts per 100 gals of spray mixture and apply as a thorough coverage spray during periods when daily temperatures exceed 70°F, and before weed growth exceeds 8" in height. Do not reenter treated areas for 24 hours following application unless protective clothing is worn.

¹ Registered trademark of Monsanto Company, Bronco contains 2.6 lbs. atachlor and 1.04 lbs. glyphosate per gal.

² Registered trademark of Westvaco Corporation.

³ Registered trademark of ICI United States, Inc.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage, disposal.

STORAGE INSTRUCTIONS

Storage should be under lock and key and secure from access by unauthorized persons and children. Storage should be in a cool dry area away from heat or ignition source. Avoid storage at high temperatures. Do not stack over 2 pallets high. Move containers by handles or cases. Do not move containers from one area to another unless they are securely sealed. Keep containers tightly sealed when not in use. Keep away from any puncture source. Avoid storage near water supplies, food, feed, and fertilizer to avoid contamination. Avoid contamination with acids or alkalis. Store in original containers only. If the containers are leaking or material is spilled follow these steps:

1. Contain spill, absorb with a material such as saw dust, clay granules or dirt.
2. Collect and place in suitable containers for disposal.
3. Wash area with water and soap to remove remaining pesticide.
4. Follow washing with clean water rinse.
5. Place a leaking container in a plastic tub and transfer contents as soon as possible to an empty original container.
6. Do not allow run off to enter sewer or contaminate water supplies.
7. Dispose of waste as indicated below:

PESTICIDE DISPOSAL:

Wastes resulting from the use of this product may be disposed of on site or at an approved disposal facility.

CONTAINER DISPOSAL:

Triple rinse (or equivalent). Then offer for recycling or reconditioning, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

WARRANTY — CONDITION OF SALE

OUR RECOMMENDATIONS FOR USE of this product are based upon tests believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically recommended and other influencing factors in the use of this product are beyond the control of the Seller. Buyer assumes all risks of use, storage, and handling of this material not in strict accordance with directions given herewith.

In no case shall Drexel or the Seller be liable for consequential, special or indirect damages resulting from the use or handling of this product when such use and/or handling is not in strict accordance with directions given herewith. The foregoing is a condition of sale by Drexel Chemical Company and is accepted as such by the Buyer.

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