



Grounds Maintenance

Your Total Herbicide Guide



 **ATHEA**
LABORATORIES, INC.

*Leaders in High-Quality,
Specialty-Chemical Products*

THE QUALITY OF ATHEA

The success of Athea's herbicide program stems from over 63 years of experience in the chemical industry. Through extensive research and development, we are able to provide superior selections for your grounds maintenance program. These include a comprehensive assortment of selective and non-selective herbicides designed to meet your specific needs.

YOUR TOTAL SOLUTION HERBICIDE SOURCE

As EPA-registered products, Total Solutions™ herbicides help clear the path to a weed-free environment. They offer Athea's quality herbicides while eliminating the paperwork and costs associated with state and federal registration. Total Solutions™ makes your herbicide choices easier.



SELECTIVE HERBICIDES

Selective herbicides address the problem of weed elimination and control in sensitive grassy areas. They contain the power to combat the toughest broadleaf weeds

in lawn and turf without harming the surrounding grasses. Refer to the Herbicide Application Chart on the back for products and specific weed applications.



NON-SELECTIVE HERBICIDES

Bare ground results can be achieved in areas plagued by persistent unwanted vegetation by utilizing the strength of Athea's non-selective herbicides. These formulas have been specifically designed

to quickly eliminate the toughest perennial weeds and to hinder new plant growth for an extended period. Excellent for use in areas such as ditches, fence rows, parking lots, patios, brick paths and railroad tracks.

ACTIVE INGREDIENTS

2,4-D / 2,4-D SALTS - Mimics the action of a growth hormone within the plant. It stimulates unusually rapid growth which strains the life support system of the plant to a point where death occurs.

BROMACIL - A residual herbicide which acts as a soil sterilant to prevent vegetation growth for an extended period of time. Works slowly as it is carried to the root zone through moisture and absorption.

DICUAT DIBROMIDE - When absorbed, it disrupts the photosynthesis process and kills the unwanted plant. This contact herbicide eliminates surface vegetation so replanting can occur soon after application. Deactivates upon contact with the soil. It can also be used to kill aquatic weeds.

GLYPHOSATE - Enters the metabolism of the weed and inhibits its growth. Systemic action kills the entire plant, roots and leaves. Becomes inactive upon contact with soil.

MCP / 2, 4, 4-DP - A group of systemic herbicides designed to kill specific broadleaf weeds. Once absorbed into the plant, they kill them by disrupting important metabolic processes within.

MSMA - An active herbicide ingredient designed to interfere with the plants metabolism by causing undue stress to the normal growth cycle.

PROMETON - Works through root and foliage absorption for "Total Kill" results. This photosynthesis inhibiting herbicide acts as a soil sterilant to control regrowth and new seedlings.

PRODUCTS

NON-SELECTIVE

#134 - DIQUAT 4.35%

- Dilutable Concentrate
- Diquat Dibromide = 4.35%
- Aquatic and terrestrial weed killer

#145 - CONKILL

- Dilutable Concentrate
- Diquat Dibromide = 1.85%
- Aquatic and terrestrial weed killer
- Available as Total Solutions™ Eliminator

#146 - CONTACT HERBICIDE #1

- Dilutable Concentrate
- Diquat Dibromide = 1.85%
- Offers no residual action and is water-dilutable
- Available as Total Solutions™ Eliminator NW

#150 - CONTACT HERBICIDE #1 RTU

- Ready-To-Use Formula
- Glyphosate = 0.96%
- Total kill without residual
- Available as Total Solutions™ Zap-It

#155 - CONTACT HERBICIDE #2 CONCENTRATE GRASS AND WEED KILLER

- Dilutable Concentrate - up to 1:43
- Glyphosate = 18%
- Rainproof in 2 hours
- Available as Total Solutions™ Zap-It Ultimate

#315 - NON-SELECTIVE HERBICIDE #1

- Ready-To-Use Formula
- Bromacil = 0.61%
- 2,4-D for quick knockdown of unwanted vegetation
- Excellent residual activity for control of regrowth

#316 - GRANULAR WEED CONTROL

- Easy-To-Spread Granules
- Bromacil = 4%
- Multi-season weed control on non-cropland areas
- Available as Total Solutions™ Weed Easy

#317 - BROM 7.5 HERBICIDE CONCENTRATE

- Dilutable Concentrate - up to 1:59
- Bromacil = 7.5 %
- Total kill herbicide for use on non-cropland areas
- Potent residual action to prevent regrowth

#318 - NON-SELECTIVE WEED KILLER CONCENTRATE

- Ready-To-Use Formula
- Bromacil = 1.20 %
- Water-based alternative herbicide
- Available as Total Solutions™ Banish

#320 - NON-SELECTIVE HERBICIDE #2

- Ready-To-Use Formula
- Bromacil = 0.98%
- 2,4-D for quick knockdown of unwanted vegetation
- Prevents regrowth for an entire growing season
- Available as Total Solutions™ Barren

322 - NON-SELECTIVE HERBICIDE #3

- Dilutable Concentrate (oil or water - up to 1:10)
- Prometon = 3.73%
- Residual control of all weeds and grasses in non-cropland areas
- Available as Total Solutions™ Turf King

324 - PROMETON 12.5% HERBICIDE CONCENTRATE

- Dilutable Concentrate (oil or water)
- Prometon = 12.5%
- For complete control of vegetation
- Root- and foliar-absorbed herbicide

8320 - NON-SELECTIVE HERBICIDE AEROSOL

- Ready-To-Use Aerosol
- Bromacil = 0.98%
- Long-lasting residual action
- Recommended for use only on non-cropland areas
- Available as Total Solutions™ Barren Aerosol

SELECTIVE

350 - SELECTIVE HERBICIDE #1 BROADLEAF WEED KILLER

- Dilutable Concentrate (water - up to 1:100)
- 2,4-D dimethylamine salt = 25%
- Excellent broadleaf weed eliminator
- Removes broadleaf weeds without harming surrounding grass

360 - SELECTIVE HERBICIDE #3 BROADLEAF WEED KILLER

- Dilutable Concentrate (water - up to 1:400)
- 2,4-D non-volatile amine salts = 31.37%
- Effectively kills stubborn broadleaf weeds
- Can be used for heavy brush and stump elimination

363 - TRIPLE SELECTIVE HERBICIDE

- Dilutable Concentrate (up to 1:96)
- 2,4-DP, MCPP = 4.5%, and 2,4-D non-volatile amine salts = 4.5%
- Controls broadleaf weeds on lawns and ornamental turf
- Available as Total Solutions™ Triple Threat

458 - LAWN AND TURF WEED CONTROL

- Dilutable Concentrate (up to 1:160)
- MSMA = 20.51%
- Controls grassy weeds on lawns and ornamental turf
- For post emergent application

8363 - TRIPLE THREAT FOAMING SELECTIVE HERBICIDE

- Ready-To-Use Aerosol
- 2,4-D = .326%, MCPP = .164%, and 2,4-DP = .161%
- High-intensity actuator accurately pinpoints weeds without hitting desired plants
- Foaming spray shows coverage to avoid over-application
- Available as Total Solutions™ Foaming Selective Herbicide

SELECTIVE HERBICIDE APPLICATION CHART

| | #350 Selective Herbicide #1 Broadleaf Weed Killer | | | | | #360 Selective Herbicide #3 Broadleaf Weed Killer | | | | | #363 Triple Selective Herbicide | | | | | #458 Lawn and Turf Weed Control | | | | | #8363 Triple Threat Foaming Selective Herbicide | | | | |
|-------------------|--|-----|-----|-----|------|--|-----|-----|-----|-----|------------------------------------|--|-----|-----|-----|------------------------------------|------|--|-----|-----|--|-----|------|---|--|
| | 350 | 360 | 363 | 458 | 8363 | | 350 | 360 | 363 | 458 | 8363 | | 350 | 360 | 363 | 458 | 8363 | | 350 | 360 | 363 | 458 | 8363 | | |
| Alders | | | | | | Goatsbeard | | | | | | | | | | | | | | | | | | | |
| Arrowhead | ● | | | | | Goldenrod | ● | | | | | | | | | | | | | | | | | | |
| Aspen | | ● | | | | Ground Ivy | | ● | ● | | | | | | | | | | | | ● | | | | |
| Aster | | | | | ● | Gumweed | | | | | | | | | | | | | | | | | | | |
| Bahiagrass | | | | ● | | Hawkweed | | | ● | | | | | | | | | | | | | | ● | ● | |
| Biden | | | | | ● | Healall | | ● | ● | | | | | | | | | | | | | ● | | ● | |
| Bindweed | | | ● | | ● | Hemp | | | | | | | | | | | | | | | ● | ● | ● | ● | |
| Bitterweed | | ● | | | ● | Henbit | ● | ● | ● | | | | | | | | | | | | | | | ● | |
| Black Medic | | | | | ● | Honeysuckle | | ● | | | | | | | | | | | | | | | | ● | |
| Blue Lettuce | | | | | ● | Horsetail | | | | | | | | | | | | | | | | | | ● | |
| Box Elder | | | | | ● | Ironweed | | | | | | | | | | | | | | | | | ● | | |
| Brambles | | ● | | | | Jewelweed | | | | | | | | | | | | | | | | ● | ● | ● | |
| Broomweed | | ● | | | ● | Jimsonweed | | ● | ● | | | | | | | | | | | | ● | ● | | ● | |
| Buckhorn | | | | | ● | Johnsongrass | | | | ● | | | | | | | | | | | | ● | | ● | |
| Burdock | | ● | ● | | ● | Knotweed | | ● | ● | | | | | | | | | | | | | | | ● | |
| Buttercup | | ● | | | ● | Kochia | | ● | | | | | | | | | | | | | ● | ● | | ● | |
| Canada Thistle | | | ● | | ● | Lambsquarter | ● | ● | ● | | | | | | | | | | | | | | | ● | |
| Carpetweed | | | | | ● | Locoweed | | | | | | | | | | | | | | | | | | ● | |
| Catnip | | | | | ● | Locust | | ● | | | | | | | | | | | | | | | | ● | |
| Chickweed | | ● | ● | ● | ● | Lupines | | | | | | | | | | | | | | | ● | | | ● | |
| Chicory | | ● | ● | | ● | Mallow | | | ● | | | | | | | | | | | | ● | | | ● | |
| Clover | | ● | ● | | ● | Maple | | ● | | | | | | | | | | | | | ● | | | | |
| Cockle | | | | | ● | Marshelder | | | | | | | | | | | | | | | | | | ● | |
| Cocklebur | | ● | | ● | ● | Mexicanweed | | | | | | | | | | | | | | | ● | ● | ● | ● | |
| Coffeeweed | | ● | | | ● | Morning Glory | ● | ● | ● | | | | | | | | | | | | | | | ● | |
| Cottonwood | | ● | | | | Mustard | ● | ● | ● | | | | | | | | | | | | | | | ● | |
| Crabgrass | | | | ● | | Musk Thistle | | | | | | | | | | | | | | | | ● | | ● | |
| Creeping Jenny | | | | | ● | Nettle | | | | | | | | | | | | | | | ● | ● | | ● | |
| Croton | | ● | | | ● | Nutsedge | | | | ● | | | | | | | | | | | | ● | | ● | |
| Dallisgrass | | | | ● | | Oak | | ● | | | | | | | | | | | | | | | | ● | |
| Dandelion | ● | ● | ● | | ● | Oxalis | | ● | ● | | | | | | | | | | | | | | | ● | |
| Dock | ● | ● | ● | | ● | Parsnip | | | | | | | | | | | | | | | ● | ● | | ● | |
| Dogbane | | | | | ● | Pennycress | | | | | | | | | | | | | | | ● | ● | | ● | |
| Dogfennel | | | ● | | ● | Pennywort | | ● | ● | | | | | | | | | | | | | | | ● | |
| Elderberry | | | | | ● | Peppergrass | ● | ● | ● | | | | | | | | | | | | ● | | | ● | |
| Elm | | ● | | | | Pigweed | ● | ● | ● | | | | | | | | | | | | | | | ● | |
| English Daisy | | | ● | | ● | Plantain | ● | ● | ● | | | | | | | | | | | | | ● | ● | ● | |
| Flea Bane (Daisy) | | | | | ● | Poison Hemlock | | | | | | | | | | | | | | | | | | ● | |
| Flixweed | | | | | ● | Poison Ivy | | ● | ● | | | | | | | | | | | | ● | | | ● | |
| Frenchweed | | | ● | | ● | Poison Oak | | ● | ● | | | | | | | | | | | | ● | | | ● | |
| | | | | | | Pokeweed | | | | | ● | | | | | | | | | | | | | ● | |
| | | | | | | Poorjoe | | | | | ● | | | | | | | | | | | | | ● | |
| | | | | | | Prickly Lettuce | | | | | ● | | | | | | | | | | ● | | | ● | |
| | | | | | | Primrose | | | | | ● | | | | | | | | | | | | | ● | |
| | | | | | | Puncture Vine | | | | | ● | | | | | | | | | | | | ● | ● | |
| | | | | | | Purslane | | | | | ● | | | | | | | | | | ● | | | ● | |
| | | | | | | Ragweed | | | | | ● | | | | | | | | | ● | ● | ● | ● | ● | |
| | | | | | | Red Clover | | | | | ● | | | | | | | | | | | | | ● | |
| | | | | | | Red Sorrel | | | | | ● | | | | | | | | | | | | | ● | |
| | | | | | | Rush | | | | | ● | | | | | | | | | | | | | ● | |
| | | | | | | Sandbur | | | | | ● | | | | | | | | | | | | ● | | |
| | | | | | | Sheep Sorrel | | | | | ● | | | | | | | | | | ● | ● | | ● | |
| | | | | | | Shepards Purse | | | | | ● | | | | | | | | | ● | ● | | | ● | |
| | | | | | | Smartweed | | | | | ● | | | | | | | | | | | ● | | ● | |
| | | | | | | Sowthistle | | | | | ● | | | | | | | | | | | | | ● | |
| | | | | | | Spurge | | | | | ● | | | | | | | | | | ● | ● | | ● | |
| | | | | | | Spurweed | | | | | ● | | | | | | | | | | | | | ● | |
| | | | | | | Stinkweed | | | | | ● | | | | | | | | | | | | | ● | |
| | | | | | | Stitchwort | | | | | ● | | | | | | | | | | | | | ● | |
| | | | | | | Sumac | | | | | ● | | | | | | | | | | ● | | | ● | |
| | | | | | | Sunflower | | | | | ● | | | | | | | | | | ● | | | ● | |
| | | | | | | Stumps | | | | | ● | | | | | | | | | | ● | | | | |
| | | | | | | Tarweed | | | | | ● | | | | | | | | | | | | | ● | |
| | | | | | | Thistle | | | | | ● | | | | | | | | | ● | ● | ● | | ● | |
| | | | | | | Tumbleweed | | | | | ● | | | | | | | | | | | | | ● | |
| | | | | | | Veronica | | | | | ● | | | | | | | | | | | | | ● | |
| | | | | | | Wild Aster | | | | | ● | | | | | | | | | | | ● | | ● | |
| | | | | | | Wild Carrot | | | | | ● | | | | | | | | | | ● | ● | | ● | |
| | | | | | | Wild Garlic | | | | | ● | | | | | | | | | | | ● | | ● | |
| | | | | | | Wild Geranium | | | | | ● | | | | | | | | | | | | | ● | |
| | | | | | | Wild Lettuce | | | | | ● | | | | | | | | | | | | | ● | |
| | | | | | | Wild Onion | | | | | ● | | | | | | | | | | ● | ● | | ● | |
| | | | | | | Wild Radish | | | | | ● | | | | | | | | | ● | ● | | | ● | |
| | | | | | | Wild Rape | | | | | ● | | | | | | | | | | | | | ● | |
| | | | | | | Willow | | | | | ● | | | | | | | | | | ● | | | ● | |
| | | | | | | Witchweed | | | | | ● | | | | | | | | | | | | | ● | |
| | | | | | | Wood Sorrel | | | | | ● | | | | | | | | | | | ● | ● | ● | |
| | | | | | | Wormseed | | | | | ● | | | | | | | | | | | | | ● | |
| | | | | | | Yarrow | | | | | ● | | | | | | | | | | ● | | | ● | |
| | | | | | | Yellow Rocket | | | | | ● | | | | | | | | | | ● | | | ● | |

Many of our selective herbicides, with the exception of #458, will kill many more broadleaf weeds than what is on this list. Please call with any questions.

