

5905-556

08/09/2012

1/26



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D C 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

Bill Washburn  
Helena Chemical Company  
225 Schilling Blvd  
Suite 300  
Collierville, TN 38017

AUG - 9 2012

Subject Helena XL 2G  
EPA Registration Number 5905-556  
Application Dated July 20, 2012  
Label Notification per PRNs 98-10 and 2007-4

Dear Mr Washburn,

The Agency is in receipt of your application for Pesticide Notification under Pesticide Registration Notices (PRNs) 98-10 and 2007-4 for Helena XL 2G (EPA Reg No 5905-556) dated July 20, 2012 The Registration Division (RD) has conducted a review of this request for its applicability under PRNs 98-10 and 2007-4 and finds that the actions requested fall within the scope of PRNs 98-10 and 2007-4 The label submitted with the application has been stamped "Notification" and will be placed in our records

If you have any questions, please contact Emily Hartman of my staff at (703) 347-0189 or hartman emily@epa gov

Sincerely,

*Michael Warr* for

Kathryn V Montague, Product Manager 23  
Herbicide Division  
Registration Division  
Office of Pesticide Programs

Please read instructions on reverse before completing form

Form Approved UMB No 2070 0060 Approval expires 05 31 98



**EPA**

United States  
**Environmental Protection Agency**  
Washington DC 20460

- Registration
- Amendment
- Other

**NOTIFICATION**  
**AUG - 9 2012**

**Application for Pesticide - Section I**

1 Company/Product Number <b>5905-556</b>	2 EPA Product Manager <b>K Montague</b>	3 Proposed Classification <input type="checkbox"/> None <input type="checkbox"/> Restricted
4 Company/Product (Name) <b>HELENA XL 2G</b>	PM# <b>23</b>	
5 Name and Address of Applicant (Include ZIP Code) <b>Helena Chemical Company 225 Schilling Blvd Suite 300 Collierville, TN 38017</b> <input type="checkbox"/> Check if this is a new address		6 <b>Expedited Review</b> In accordance with FIFRA Section 3(c)(3) (b)(l) my product is similar or identical in composition and labeling to EPA Reg No _____ Product Name _____

**Section - II**

<input type="checkbox"/> Amendment - Explain below	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> Me Too Application
<input checked="" type="checkbox"/> Notification Explain below	<input type="checkbox"/> Other Explain below

**Explanation** Use additional page(s) if necessary (For Section I and Section II)

**Notification of label change per PR Notice 2007-4** This notification is consistent with guidance in PR Notice 2007 4 and the requirements of EPA's regulations at 40 CFR §§ 156 10 156 140 156 144 156 146 and 156 156 No other changes have been made to the labeling or the Confidential Statement of Formula for this product I understand that it is a violation of 18 USC Sec 1001 to willfully make any false statement to EPA I further understand that if the amendment is not consistent with the requirements of 40 CFR §§ 156 10 156 140 156 144 156 146 and 156 156 this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA

**Notification of label change - corrections to warranty statement - per PR Notice 98-10** This notification is consistent with the provisions of PR Notice 98 10 and EPA regulations at 40 CFR 152 46 and no other changes have been made to the labeling or the confidential statement of formula of this product I understand that it is a violation of 18 USC Sec 1001 to willfully make any false statement to EPA I further understand that if this notification is not consistent with the terms of PR Notice 98 10 and 40 CFR 152 46 this may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA

**Section - III**

1 Material This Product Will Be Packaged In				2 Type of Container	
Child Resistant Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If Yes Unit Packaging wgt No per container		<input type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input type="checkbox"/> Other (Specify)
*Certification must be submitted		If Yes Package wgt No per container			
3 Location of Net Contents Information <input checked="" type="checkbox"/> Label <input type="checkbox"/> Container		4 Size(s) Retail Container		5 Location of Label Directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On labeling accompanying product	
6 Manner in Which Label is Affixed to Product <input type="checkbox"/> Lithograph <input checked="" type="checkbox"/> Paper glued <input type="checkbox"/> Stenciled <input type="checkbox"/> Other _____					

**Section - IV**

1 Contact Point (Complete items directly below for identification of individual to be contacted if necessary to process this application)		
Name <b>Bill Washburn</b>	Title <b>Registration Specialist</b>	Telephone No (Include Area Code) <b>901 752-4420</b>
I certify that the statements I have made on this form and all attachments thereto are true accurate and complete I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law		o Date Application Received <b>(Stamped)</b>
2 Signature <i>Bill Washburn</i>	3 Title <b>Registration Specialist</b>	
4 Typed Name <b>Bill Washburn</b>	5 Date <b>July 20 2012</b>	



**HELENA CHEMICAL COMPANY**

225 Schilling Blvd , Suite 300  
Collierville, Tennessee 38017  
Telephone 901-761-0050

July 20, 2012

Ms Kathryn Montague, PM 23  
Document Processing Desk (NOTIF)  
Office of Pesticide Programs – 7504PC  
U S Environmental Protection Agency  
One Potomac Yard, Room S-4900  
2777 South Crystal Drive  
Arlington, VA 22202

**Subject HELENA XL 2G  
EPA Reg No 5905-556**

**Notification of Label Change per PR Notices 2007-4 and 98-10**

Dear Ms Montague

Please find the following enclosed

- Application for Pesticide Registration (Other) dated 7/20/2012 noting notification per PR Notice 2007-4 and 98-10
- One highlighted copy (STK) of subject label, showing all changes made per PR Notice 2007-4 and 98-10
- One clean copy (CLN) of the subject label

Notification of label change (storage and disposal revisions) per PR Notice 2007-4 This notification is consistent with guidance in PR Notice 2007-4 and the requirements of EPA's regulations at 40 CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156. No other changes have been made to the labeling or the Confidential Statement of Formula for this product. I understand that it is a violation of 18 USC Sec 1001 to willfully make any false statement to EPA. I further understand that if the amendment is not consistent with the requirements of 40 CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

Notification of label change (warranty revisions) per PR Notice 98-10 This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 USC Sec 1001 to willfully make any false statement to EPA. I further understand that if this



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NOTIFICATION

AUG - 9 2012

# XL 2G

**Contains oryzalin, the active ingredient in Surflan herbicides**

**A selective preemergence herbicide for control of certain annual grasses and broadleaf weeds in**

- Container grown ornamentals
- Landscape ornamentals
- Nursery stock
- Ground covers
- Established flowers
- Ornamental bulbs
- Non-bearing fruit and nut trees and non-bearing vineyards
- Non-bearing berries
- Christmas tree plantations
- Non-cropland
- Established tall fescue and warm season turf (including bahiagrass bermudagrass buffalograss centipedegrass St Augustinegrass and zoysiagrass)

### ACTIVE INGREDIENTS

benefin N-butyl-N-ethyl- $\alpha$   $\alpha$ -trifluoro-2,6-dinitro-p-toluidine 1 0%

oryzalin 3,5-dinitro-N<sup>4</sup>,N<sup>4</sup>-dipropylsulfanilamide 1 0%

### INERT INGREDIENTS

**Total** 98 0%

Contains 1 pound active ingredient per 50 pound bag

100 0%

**Keep Out of Reach of Children**

## CAUTION PRECAUCION

*Si usted no entiende la etiqueta busque a alguien para que se la explique a usted en detalle (If you do not understand the label find someone to explain it to you in detail)*

### First Aid

#### IF IN 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 eye
- Call a poison control center or doctor for treatment advice

### HOT LINE

Have the product container or label with you when calling a poison control center or doctor or going for treatment You may also contact 1-800-424-9300 for emergency medical treatment information

EPA Reg No 5905-556  
EPA Est No

AD 071408  
NET WEIGHT \_\_\_\_\_

### Specialty Herbicide

**MANUFACTURED FOR  
HELENA CHEMICAL COMPANY  
225 SCHILLING BOULEVARD, SUITE 300  
COLLIERVILLE, TENNESSEE 38017**

**Precautionary Statements  
Hazards to Humans and Domestic Animals  
CAUTION**

*Causes moderate eye irritation Avoid contact with eyes or clothing Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals*

**Personal Protective Equipment (PPE)**

**Applicators and other handlers must wear**

- Long-sleeved shirt and long pants
- Shoes plus socks

*Follow manufacturer s instructions for cleaning/maintaining PPE If no such instructions for washables exist use detergent and hot water Keep and wash PPE separately from other laundry*

**User Safety Recommendations**

**Users should**

- Wash hands before eating drinking chewing gum using tobacco or using the toilet
- Remove clothing immediately if pesticide gets inside Then wash thoroughly and put on clean clothing
- 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

**Environmental Hazards**

*This pesticide is toxic to fish and aquatic invertebrates 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 contaminate water when disposing of equipment washwaters or rinsate Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas*

**Directions for Use**

*It is a violation of Federal law to use this product in a manner inconsistent with its labeling Read all Directions for Use carefully before applying*

*Do not apply this product in a way that will contact workers or other persons either directly or through drift Only protected handlers may be in the area during application For any requirements specific to your State or Tribe consult the agency responsible for pesticide regulation*

**Agricultural Use Requirements**

*Use this product only in accordance with its labeling and with the Worker Protection Standard 40 CFR part 170 This Standard contains requirements for the protection of agricultural workers on farms forests nurseries and greenhouses and handlers of agricultural pesticides It contains requirements for training decontamination notification and emergency assistance It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted entry interval The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard*

*Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours **Exception** If the product is soil-injected or soil incorporated the Worker Protection Standard under certain circumstances allows workers to enter the treated area if there will be no contact with anything that has been treated*

*PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated such as plants soil or water is*

- Coveralls
- Chemical-resistant gloves
- Shoes plus socks

### Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for Agricultural Pesticides (40 CFR Part 170) The WPS applies when this product is used to produce agricultural plants on farms forests nurseries or greenhouses

**Entry Restrictions for Non-WPS Uses** Keep all persons children and pets out of treated area until dusts have settled

### Storage and Disposal

Do not contaminate water food or feed by storage or disposal

**Pesticide Storage** Store in original container only In case of leak or spill contain material and dispose as waste

**Pesticide Disposal** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility

**Container Handling** Nonrefillable container Do not reuse or refill this container Completely empty bag into application equipment Offer for recycling, if available or then dispose of empty bag in a sanitary landfill or by incineration or if allowed by state and local authorities by burning If burned stay out of smoke

### General Information

**HELENA® XL 2G** herbicide is a preemergence herbicide for control of certain annual grasses and broadleaf weeds in container and landscape ornamentals nursery stock ground covers established tall fescue and warm season turf established flowers ornamental bulbs non-bearing fruit and nut trees and non-bearing vineyards non-bearing berries Christmas tree plantations non-cropland and established tall fescue and warm season turf (including bahiagrass bermudagrass buffalograss centipedegrass St Augustinegrass and zoysiagrass) Apply **HELENA® XL 2G** prior to germination of target weeds or immediately after cultivation Length of weed control will vary with rate of **HELENA® XL 2G** applied weed population potting media or soil conditions temperature watering regime and other factors Following application user should monitor and observe level of weed control over time to determine when additional applications may be needed

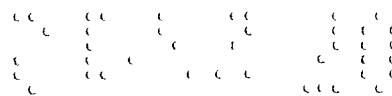
### Precautions and Restrictions

**Do not aerially apply this product**

Do not graze or feed forage from treated areas to livestock

**HELENA® XL 2G** does not control established weeds Existing weeds should be controlled by cultivation or with postemergence herbicides Weed residues prunings and trash should be removed or thoroughly mixed into soil prior to treatment Soil should be in good condition and free of clods at the time of application When applied to turf this product must be watered in as soon as possible after application to dissolve the granules A single rainfall or sprinkler irrigation of 0.5 inches or more or flood irrigation is required to activate **HELENA® XL 2G** If rainfall or irrigation has not occurred within 21 days of application and tillage is possible **HELENA® XL 2G** may be activated using cultivation equipment capable of uniformly mixing the herbicide into the upper 1-2 inches of soil Failure to activate **HELENA® XL 2G** may result in erratic weed control Do not apply when wind conditions favor drift of **HELENA® XL 2G** granules from the target area

Users who wish to use **HELENA® XL 2G** on plant species not recommended on this label may determine the suitability for such uses by treating a small number of such plants at a recommended rate Prior to treatment of larger areas the treated plants should be observed for any sign of herbicidal injury during 30 to 60 days of normal growing conditions to determine if the treatment is non-injurious to the target plant species **The user assumes responsibility for any plant damage or other liability resulting from use of HELENA® XL 2G on plant species not recommended on this label**



### Application Directions

Apply **HELENA® XL 2G** using a drop or rotary-type spreader designed to apply granular herbicides or insecticides. Calibrate application equipment prior to use according to manufacturer's directions. Check frequently to be sure equipment is working properly and distributing granules uniformly. Do not use spreaders that apply material in narrow concentrated bands. Avoid skips or overlaps as poor weed control or crop injury may occur. More uniform application may be achieved by spreading half of the required amount of product over the area and then applying the remaining half in swaths at right angles to the first.

#### Application Techniques for Applying HELENA® XL 2G

- When using a drop-type spreader a splashboard mounted under the hopper will provide more even granule distribution.
- A chain fastened to the side of the spreader and allowed to drag on the soil surface can be used to mark the edge of the treated swath and help prevent skips or overlaps.
- For treating smaller areas or rows of nursery stock or ornamental beds a hand held or push-type rotary applicator such as a whirlybird or cyclone unit is recommended. For hand held units walk and turn the crank at a constant rate of speed.
- A shaker type applicator made from a small container with holes punched in the bottom is recommended for small difficult to treat areas. Carefully measure the amount of product needed to avoid over-application.

### Approved Uses

**Established† Container Grown Ornamentals, Established Tall Fescue and Warm Season Turfgrasses, Landscape Ornamentals, Nursery Stock, Ground Covers, Flowers, Ornamental Bulbs, Non-bearing Fruit and Nut Trees and Non-bearing Vineyards, Non bearing Berries, Christmas Tree Plantations, and Non-cropland**

**HELENA® XL 2G** is recommended as a preemergence treatment for control of certain annual grasses and broadleaf weeds in container grown ornamentals, landscape ornamentals, nursery stock, ground covers, established tall fescue, warm season turfgrasses, established flowers, ornamental bulbs, non-bearing fruit and nut trees and non-bearing vineyards, non-bearing berries, Christmas tree plantations and non-cropland. Apply **HELENA® XL 2G** prior to germination of target weeds or immediately after cultivation.

#### Broadcast Application Rates

Labeled Use Site	HELENA® XL 2G		Minimum Time Between Applications (months)	Total Amount Allowed Per Year (lb/acre)
	(lb/acre)	(lb/1000 sq ft)		
• Landscape Ornamentals	200	4.6	2	800
• Field grown and container-grown ornamentals	300	6.9	4	900

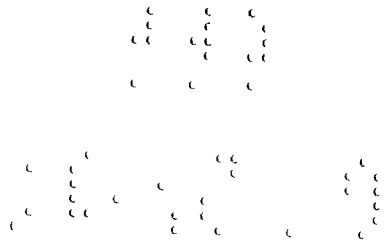
Landscape and field grown ornamentals: Maximum of 2 applications per year

Nonbearing fruit and nut trees and non-bearing vineyards – Maximum of 2 applications per year

**Note:** Refer to the General Information section of this label for use precautions and information on application.

#### Special Use Precautions

- To avoid possible plant injury, do not apply **HELENA® XL 2G** to plants or areas in greenhouses or other enclosed structures.
- plants that will bear fruits, berries, or nuts within 12 months of application.
- nursery seedbeds or forest or Christmas tree seedling transplant beds.
- unrooted liners or cuttings that have been planted in pots for the first time.
- pots less than four inches wide.
- ground covers until they are established and well rooted.





ornamental plantings where the likelihood of runoff onto lawn areas containing dichondra or cool season turfgrass species exists

Do not apply HELENA® XL 2G to the following plant species or injury may occur

- Begonia spp (begonia)
- Coleus hybridus (coleus)
- Deutzia gracilis (slender deutzia)
- Pseudotsuga menziesii (Douglas-fir)
- Thuja occidentalis Techny (Techny arborvitae)
- Tsuga canadensis (eastern hemlock)

**Ice Plant** When establishing unrooted ice plant (*Mesembryanthemum crystallinum* and *Carpobrotus edulis*) on coarse soils do not exceed the 200 lb/acre rate of HELENA® XL 2G or crop injury may occur After the ice plant is well established a second application may be made

**†Definition of established plantings** Apply only to established plantings Established plants are defined as those that have been transplanted into their final growing location for a sufficient period of time to allow the soil to be firmly settled around the roots from packing and rainfall or irrigation Do not apply to seedbeds or seedling transplant beds

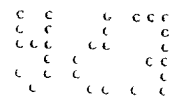
**Unlisted plant species** Users who wish to use HELENA® XL 2G on plant species not recommended on this label may determine the suitability for such uses by treating a small number of such plants at a recommended rate Prior to treatment of larger areas the treated plants should be observed for any sign of herbicidal injury during 30 to 60 days of normal growing conditions to determine if the treatment is non-injurious to the target plant species The user assumes responsibility for any plant damage or other liability resulting from use of HELENA® XL 2G on plant species not recommended on this label

### Weeds Controlled or Suppressed by HELENA® XL 2G

Weeds controlled when HELENA® XL 2G is applied at a rate of 200 to 300 pounds per acre (4.6 to 6.9 pounds per 1000 sq ft)

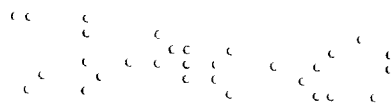
#### Annual Grasses

Common Name	Scientific Name
barley little	<i>Hordeum pusillum</i>
barnyardgrass	<i>Echinochloa crus-galli</i>
bluegrass annual	<i>Poa annua</i>
crabgrass	<i>Digitaria spp</i>
crowfootgrass	<i>Dactyloctenium aegyptium</i>
cupgrass southwestern	<i>Eriochloa gracilis</i>
foxtail	<i>Setaria spp</i>
goosegrass	<i>Eleusine indica</i>
johnsongrass (seedling only)	<i>Sorghum halepense</i>
junglerice	<i>Echinochloa colonum</i>
lovegrass Mexican	<i>Eragrostis mexicana</i>
lovegrass orcutt	<i>Eragrostis orcuttiana</i>
oat wild	<i>Avena fatua</i>
panicum browntop	<i>Panicum fasciculatum</i>
panicum fall	<i>Panicum dichotomiflorum</i>
panicum Texas	<i>Panicum texanum</i>
ryegrass Italian	<i>Lolium multiflorum</i>
sandbur field	<i>Cenchrus incertus</i>
signalgrass	<i>Brachiaria spp</i>
sprangletop red	<i>Leptochloa filiformis</i>
witchgrass	<i>Panicum capillare</i>



#### Broadleaf Weeds

Common Name	Scientific Name
bittercress	<i>Cardamine oligosperma</i>
carpetweed	<i>Mollugo verticillata</i>



<i>chickweed common</i>	<i>Stellaria media</i>
<i>fiddleneck coast</i>	<i>Amsinckia intermedia</i>
<i>filaree redstem</i>	<i>Erodium cicutarium</i>
<i>filaree whitestem</i>	<i>Erodium moschatum</i>
<i>groundsel common</i>	<i>Senecio vulgaris</i>
<i>henbit</i>	<i>Lamium amplexicaule</i>
<i>knotweed prostrate</i>	<i>Polygonum aviculare</i>
<i>lambquarters common</i>	<i>Chenopodium album</i>
<i>pigweed</i>	<i>Amaranthus spp</i>
<i>puncturevine</i>	<i>Tribulus terrestris</i>
<i>purslane common</i>	<i>Portulaca oleracea</i>
<i>pusley Florida</i>	<i>Richardia scabra</i>
<i>rocket London</i>	<i>Sisymbrium irio</i>
<i>rockpurslane desert</i>	<i>Calandrinia ciliata</i>
<i>shepherdspurse</i>	<i>Capsella bursa-pastoris</i>
<i>spurge prostrate</i>	<i>Euphorbia humistrata</i>
<i>woodsorrel yellow</i>	<i>Oxalis stricta</i>

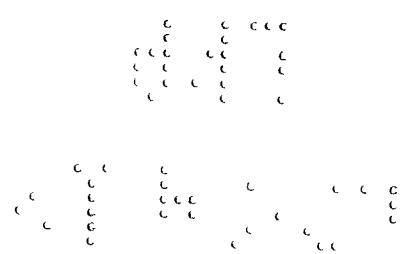
In addition to the weeds controlled, the following weeds will be partially controlled or suppressed at 200 to 300 pounds per acre (4 6 to 6 9 pounds per 1000 sq ft)

<b>Common Name</b>	<b>Scientific Name</b>
<i>horseweed</i>	<i>Conyza canadensis</i>
<i>ladysthumb</i>	<i>Polygonum persicaria</i>
<i>lettuce prickly</i>	<i>Lactuca serricola</i>
<i>mallow common</i>	<i>Malva neglecta</i>
<i>milkweed climbing</i>	<i>Sarcostemma cynanchoides</i>
<i>morningglory</i>	<i>Ipomoea spp</i>
<i>mustard black</i>	<i>Brassica nigra</i>
<i>mustard wild</i>	<i>Brassica kaber</i>
<i>nightshade black</i>	<i>Solanum nigrum</i>
<i>ragweed common</i>	<i>Ambrosia artemisiifolia</i>
<i>smartweed</i>	<i>Polygonum pennsylvanicum</i>
<i>sowthistle annual</i>	<i>Sonchus oleraceus</i>
<i>spurge spotted</i>	<i>Euphorbia maculata</i>
<i>teaweed (prickly sida)</i>	<i>Sida spinosa</i>
<i>velvetleaf</i>	<i>Abutilon theophrasti</i>
<i>wheat volunteer</i>	<i>Triticum spp</i>

**HELENA® XL 2G May Be Used On The Following Established Plant Species  
(Note limitations on recommended treatment methods )**

<b>Trees</b>	
<b>Recommended Treatment Method</b>	
<b>C = Container Grown</b>	
<b>F = Field Grown</b>	
<u>Scientific Name/Common Name</u>	
<i>Abies balsamea</i> Balsam fir	F
<i>Abies concolor</i> White fir	F
<i>Abies fraseri</i> Fraser fir	F
<i>Abies grandis</i> Grand fir	F
<i>Abies lasiocarpa</i> Alpine fir	F
<i>Abies veitchi</i> Veitch fir	F

<i>Abutilon hybridum</i>	
<i>Albus</i> flowering maple	F
<i>Luteus</i> flowering maple	F
<i>Roseus</i> flowering maple	F
<i>Tangerine</i> flowering maple	F
<i>Vesuvius</i> red flowering maple	F
<i>Acer</i> spp	
maple	F
<i>Arecastrum romanzoffianum</i>	
Queen palm	F
<i>Betula papyrifera</i>	
Paper birch	F
<i>Betula nigra</i>	
River birch	F
<i>Betula pendula</i>	
White birch	F
<i>Bucida buceras</i>	
Black olive	F
<i>Ceratonia siliqua</i>	
Carob	F
<i>Cercidium floridum</i>	
Blue palo verde	F
<i>Cercis Canadensis</i>	
Redbud	C F
<i>Chamaecyparis lawsoniana</i>	
Lawson falsecypress	F
<i>Chamaecyparis obtusa</i> spp	
<i>Filicoides</i> -fern spray cypress	F
<i>Gracilis</i> -slender Hinoki cypress	F
<i>Chamaecyparis pisifera</i>	
Sawara-false cypress	F
<i>Squarrosa</i> -moss cypress	F
<i>Chamaedorea cataractarum</i>	
Cat palm	F
<i>Chamaedorea costaricana</i>	
Palm	F
<i>Chamaedorea elegans</i>	
Parlor palm	F
<i>Cornus florida</i>	
Flowering dogwood	F
<i>Crupaniopsis anacardioides</i>	
Carrot wood	F
<i>Cryptomeria japonica</i>	
Japanese cryptomeria	C F
<i>Cupressus glabra</i>	
Arizona cypress	C F
<i>Cupressus sempervirens</i>	
Italian cypress	C F
<i>Elaeagnus angustifolia</i>	
Russian olive	C F
<i>Eucalyptus cinerea</i>	
Mealy eucalyptus	F
Silver dollar eucalyptus	F
<i>Eucalyptus camaldulensis</i>	
Red gum eucalyptus	F
<i>Eucalyptus nicholii</i>	
Narrow-leaved eucalyptus	F
<i>Eucalyptus sideroxylon</i>	
Red ironbark eucalyptus	F
<i>Ficus benjamina</i>	









Spreading euonymus	F
Fatshedera lizei	
Fatshedera	CF
Forsythia intermedia	
Forsythia	F
Gardenia jasminoides	
Gardenia	CF
Genista pilosa	
Woadwaxen	F
Hibiscus rosa-sinensis	
Chinese hibiscus	F
Ross Estey hibiscus	F
Hibiscus syriacus	
Rose of Sharon Red Bird	F
Rose of Sharon Red Heart	F
Rose of Sharon Woodbridge	F
Hypencum spp	
St Johnswort	F
Ilex aquifolium	
Balkans holly	F
English holly	F
Gold coast holly	F
Ilex aquipernyi	
San Jose holly	CF
Ilex cornuta	
Chinese holly	CF
Dwarf burford holly	CF
Ilex crenata	
Convexa holly	CF
Compacta dwarf Japanese holly	CF
Helleri-Heller's Japanese holly	CF
Japanese holly	CF
Ilex glabra	
Nordica-inkberry holly	F
Ilex meserveae	
Blue girl holly	F
Blue boy holly	F
Ebony magic holly	F
Ilex vomitoria	
Nana-dwarf yaupon holly	CF
Pendula-weeping yaupon holly	CF
Yaupon holly	CF
Juniperus spp	
Juniper	CF
Justicia brandegeana	
Shrimp plant	CF
Justicia spicigera	
Mexican honeysuckle	F
Lagerstroemia indica	
Crape myrtle	CF
Leucothoe axillans	
Coast leucothoe	F
Leucothoe fontanesiana	
Drooping leucothoe	F
Ligustrum amurense	
Amur privet	CF
Ligustrum japonicum	
Japanese privet	CF
Yellow tip ligustrum	CF
Ligustrum texanum	

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<i>Christmas palm</i>	F
<i>Viburnum davidii</i>	
David viburnum	F
<i>Viburnum japonicum</i>	
Viburnum	F
<i>Viburnum opulus sterile</i>	
Eastern snowball viburnum	F
<i>Viburnum plicatum tomentosum</i>	
Doublefile viburnum	F
<i>Viburnum x pragense</i>	
Virburnum	F
<i>Viburnum setigerum</i>	
Tea viburnum	F
<i>Viburnum suspensum</i>	
Sandankwa viburnum	F
<i>Viburnum tinus</i>	
Compactum-spring bouquet viburnum	F
Laurastinus viburnum	C F
<i>Viburnum trilobum</i>	
Compactum-dwarf cranberry bush	F
<i>Weigela florida</i>	
Java red weigela	F
Bristol ruby weigela	F
Minuet weigela	F
<i>Xylosma congestum</i>	
Xylosma	F
<i>Yucca elata</i>	
Soaptree yucca	C F
<i>Yucca recurvifolia</i>	
Pendulous yucca	F

**Ground Covers**

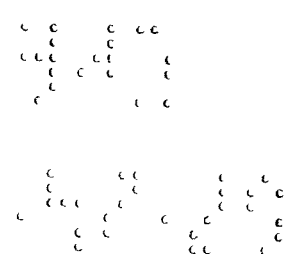
**Recommended Treatment Method**

**C = Container Grown**

**F = Field Grown**

**Scientific Name/Common Name**

<i>Agapanthus africanus</i>	
Lily-of-the-Nile	C F
<i>Ajuga spp</i>	
Carpet bugle	F
<i>Arctotheca calendula</i>	
Cape weed	F
<i>Campanula elatines</i>	
Bellflower	C F
<i>Carpobrotus edulis</i>	
Largeleaf iceplant	F
<i>Clytostoma callistegioides</i>	
Violet trumpet vine	C F
<i>Cortaderia selloana</i>	
Pampas grass	F
<i>Delosperma alba</i>	
White iceplant	F
<i>Drosanthemum florbundum</i>	
Trailing rosea iceplant	F
<i>Festuca ovina</i>	
Blue fescue	F
<i>Gazania spp</i>	
Gazania	F
<i>Hedera canariensis</i>	
Algerian ivy	F
<i>Hedera helix</i>	

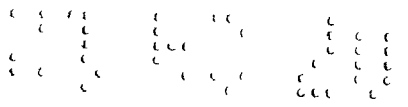
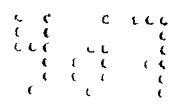


English ivy	F
Hemerocallis spp	
Day lily	C F
Hosta spp	
Plantain lily	C F
Hypericum spp	
St Johnswort	F
Lampranthus spectabilis	
Red trailing iceplant	F
Liriope gigantea	
White lily turf	F
Liriope muscari	
Big blue lily turf	C F
Lilac beauty lily turf	C F
Majestic lily turf	C F
Monroe white lily turf	C F
Silvery sunproof lily turf	C F
Variegated Liriope lily turf	C F
Lonicera japonica	
Japanese honeysuckle	F
Mesembryanthemum crystallinum	
Ice plant	F
Ophiopogon japonicus	
Mondo grass	F
Osteospermum fruticosum	
Trailing African daisy	F
Sedum brevifolium	
Stonecrop	F
Trachelospermum jasminoides	
Chinese star jasmine	F
Vinca major	
Bigleaf periwinkle	F
Vinca minor	
Dwarf periwinkle	F

**Established Flowers**  
**Recommended Treatment Method**  
**C = Container Grown**  
**F = Field Grown**

**Scientific Name/Common Name**

Achillea spp	
Yarrow	F
Antirrhinum majus	
Snapdragon	F
Caladium bicolor	
Fancy-leaved caladium	F
Chrysanthemum coccineum	
Painted daisy	F
Chrysanthemum maximum	
Shasta daisy	F
Chrysanthemum morifolium	
Chrysanthemum	F
Coreopsis lanceolata	
Coreopsis	F
Dianthus barbatus	
Sweet william	F
Dicentra spectabilis	
Bleeding heart	C F
Dimorphotheca spp	
Cape marigold	F
Echinacea purpurea	



<i>Purple coneflower</i>	F
<i>Geum quellyon</i>	
<i>Geum</i>	F
<i>Gladiolus hortulanus</i>	
<i>Gladiolus</i>	F
<i>Gypsophila paniculata</i>	
<i>Baby's breath</i>	F
<i>Impatiens wallerana</i>	
<i>Impatiens</i>	F
<i>Iris spp</i>	
<i>Bearded iris</i>	F
<i>Liatris spicata</i>	
<i>Blazing star</i>	C F
<i>Pelargonium hortorum</i>	
<i>Geranium</i>	F
<i>Petunia spp</i>	
<i>Petunia</i>	F
<i>Portulaca grandiflora</i>	
<i>Rose moss</i>	F
<i>Ranunculus asiaticus</i>	
<i>Persian ranunculus</i>	F
<i>Rosa spp</i>	
<i>Rose</i>	F
<i>Rudbeckia hirta</i>	
<i>Gloriosa daisy/black eyed susan</i>	F
<i>Salvia spp</i>	
<i>Sage</i>	F
<i>Stokesia laevis</i>	
<i>Stokes aster</i>	F
<i>Strelitzia reginae</i>	
<i>Bird of paradise</i>	F
<i>Tagetes spp</i>	
<i>Margold</i>	F
<i>Viola wittrockiana</i>	
<i>Pansy</i>	F
<i>Zinnia elegans</i>	
<i>Common zinnia</i>	F

**Non-bearing Fruit and Nut Trees  
and Non-bearing Vineyards †**

<u>Common Name</u>	<u>Recommended Treatment Method</u>	
	<b>C = Container Grown</b>	
	<b>F = Field Grown</b>	
Almond	F	
Apple	F	
Apricot	F	
Avocado	F	
Cherry sour	F	
Cherry sweet	F	
Fig	F	
Filbert	F	
Grape American	F	C    C    C    C
Grape European	F	C    C    C    C
Grapefruit	F	C    C    C    C
Kiwi	F	
Kumquat	C F	
Lemon	F	C    C    C    C
Macadamia nut	F	C    C    C    C
Nectarine	F	C    C    C    C

Olive	F
Orange	CF
Peach	F
Pear	F
Pecan	CF
Pistachio	F
Plum	F
Pomegranate	F
Prune	F
Walnut black	F
Walnut English	F

† Non-bearing fruit and nut trees and non-bearing vineyards are defined as plants that will not bear fruit for at least one year after treatment. Do not apply to plants that will bear fruits, berries or nuts within 12 months of application.

### Non-bearing Berries †

	<b>Recommended Treatment Method</b>
	<b>C = Container Grown</b>
	<b>F = Field Grown</b>
<b>Common Name</b>	
Blackberry	F
Blueberry	F
Boysenberry	F
Currant	F
Dewberry	F
Elderberry	F
Gooseberry	F
Loganberry	F
Raspberry	F

† Non-bearing berries are defined as plants that will not bear berries for at least one year after treatment. Do not apply to plants that will bear fruits, berries or nuts within 12 months of application.

### Ornamental Bulbs

#### Special Use Precautions

Do not apply to tulip plants that have emerged to a height greater than 3/4 inch. Deep till prior to planting any crop after this use.

Do not apply to gladioli prior to emergence or to plants less than one inch in diameter.

Fall application to coarse soils – Maximum of 2 applications per year.

February through March applications to all soils – Maximum of 3 applications per year.

#### Application Rates, Frequency, and Timing of Applications

HELENA® XL 2G may be applied for annual weed control in ornamental bulbs such as bulbous iris, daffodil (narcissus), hyacinth, and tulip. Apply HELENA® XL 2G to the soil surface two (2) to four (4) weeks after planting and final hilling but prior to the emergence of annual weeds. HELENA® XL 2G may also be applied following bulb emergence. For fall-planted bulbs, apply HELENA® XL 2G again in late winter or early spring to weed-free soil surfaces.

#### Broadcast Application Rates

Time of Application	Soil Texture	HELENA® XL 2G		Minimum Time Between Applications (months)	Total Amount Allowed Per Year (lb/acre)
		(lb/acre)	(lb/1000 sq ft)		
Fall	Coarse	75	17	3	150
Fall	Medium and Fine	150	34	3	225
Feb - March	All Soil Textures	75	17	3	225

### Christmas Tree Plantations

Apply **HELENA® XL 2G** to established plantings of labeled field grown Christmas tree species prior to germination of target weeds. Do not apply to Douglas fir (*Pseudotsuga menziesii*) or Eastern hemlock (*Tsuga canadensis*). Do not apply to seedbeds or seedling transplant beds. Apply only to established plantings. Established plants are defined as those that have been transplanted into their final growing location for a sufficient period of time to allow the soil to be firmly settled around the roots from packing and rainfall or irrigation.

Maximum of 2 applications per year

#### Broadcast Application Rates

Length of Control	HELENA® XL 2G		Minimum Time Between Applications (months)	Total Amount Allowed Per Year (lb/acre)
	(lb/acre)	(lb/1000 sq ft)		
2 - 4 months	200	4.6	2	800

**Note** Refer to the General Information section of this label for use precautions and information on application. Refer to Approved Uses section of this label for special use precautions and information weeds controlled.

### Noncropland Areas Industrial Sites, Utility Substations, Highway Guardrails, Sign Posts, and Delineators

**HELENA® XL 2G** is recommended as a preemergence treatment for control of certain annual grasses and broadleaf weeds on industrial sites, utility substations, highway guardrails, sign posts, and delineators. Apply **HELENA® XL 2G** prior to germination of target weeds. Areas to be treated should be free of established weeds or existing weeds should be controlled with postemergence herbicides.

Maximum of 2 applications per year

#### Broadcast Application Rates

Length of Control	HELENA® XL 2G		Minimum Time Between Applications (months)	Total Amount Allowed Per Year (lb/acre)
	(lb/acre)	(lb/1000 sq ft)		
2 - 4 months	200	4.6	2	600

**Note** Refer to the General Information section of this label for use precautions and information on application. Refer to Approved Uses section of this label for special use precautions and information weeds controlled.

### Warm Season Turfgrasses

**HELENA® XL 2G** may be applied as a preemergence treatment for control of annual grasses and certain broadleaf weeds in established warm season turf including bahiagrass, bermudagrass, buffalograss, centipedegrass, St. Augustinegrass, and zoysiagrass or established tall fescue growing in warm season areas. Established turf is defined as a dense turf having a well-anchored root system and healthy, vigorous top growth.

Successful preemergence control of weeds listed on this label requires that **HELENA® XL 2G** be applied prior to weed germination and be activated by at least one-half (1/2) inch of rainfall or irrigation within 21 days of application.

#### Special Use Precautions

To avoid possible injury, do not apply **HELENA® XL 2G** to

- Cool season turfgrass species other than tall fescue
- Lawns containing dichondra or cool season turfgrass species
- Golf course putting greens or tees
- Turfgrass in the spring that was planted the previous fall

- Newly sprigged or sodded areas of bermudagrass St Augustinegrass centipedegrass zoysiagrass or tall fescue until these turfs are well established and have well anchored root systems
- Newly hydromulched areas of bermudagrass until such areas are well established
- Helena® XL 2G must be watered in as soon as possible after application to dissolve the granules A single rainfall or irrigation of ½ inch or more is required after product application Watering-in must be performed by the commercial applicator or the commercial applicator must provide the following information to the resident or owner in writing
  - This product must be watered in as soon as possible
  - Do not enter or allow others (including children or pets) to enter the treated areas (except those involved in the watering) until the watering-in is complete and the surface is dry

HELENA® XL 2G will not control emerged weeds

HELENA® XL 2G may injure turf that is not well established or is stressed or weakened due to unfavorable winter climatic conditions drought nematodes or other factors which damage or weaken turf root systems Apply HELENA® XL 2G only to healthy well-established turf that has a well anchored root system

Do not apply HELENA® XL 2G in the spring or early summer to tall fescue turfgrass reseeded the previous fall In such cases apply Balan\* 2 5G granular herbicide at 60 to 80 pounds per acre in early summer (Round 1) and HELENA® XL 2G at 100 pounds per acre approximately eight weeks later (Round 2)

HELENA® XL 2G may thin established annual bluegrass (Poa annua) at rates above 100 pounds per acre

In bermudagrass areas that have been overseeded with winter grasses a spring application of HELENA® XL 2G will thin the overseeded grasses

The maximum application rate is 3 lbs ai per acre per application  
The maximum number of applications is 2 per year  
The maximum annual application rate is 6 lbs ai per acre per year

**Weeds Controlled or Suppressed by HELENA® XL 2G**

Weeds controlled by HELENA® XL 2G when applied at 100 to 150 lb/acre (2 3 to 3 4 lb/1000 sq ft)

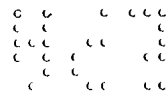
**Annual Grasses**

**Summer Annuals**

Common Name	Scientific Name
barnyardgrass	Echinochloa crus-galli
crabgrass	Digitaria spp
crowfootgrass	Dactyloctenium aegyptium
foxtail	Setaria spp
goosegrass	Eleusine indica
johnsongrass	Sorghum halepense
(seedling only)	
ryegrass Italian	Lolium multiflorum
sandbur field	Cenchrus incertus

**Winter Annuals**

Common Name	Scientific Name
bluegrass annual	Poa annua



**Broadleaf Weeds**

**Summer Annuals**

<b>Common Name</b>	<b>Scientific Name</b>
<i>carpetweed</i>	<i>Mollugo verticillata</i>
<i>knotweed prostrate</i>	<i>Polygonum aviculare</i>
<i>purslane common</i>	<i>Portulaca oleracea</i>

**Winter Annuals**

<b>Common Name</b>	<b>Scientific Name</b>
<i>chickweed common</i>	<i>Stellaria media</i>
<i>henbit</i>	<i>Lamium amplexicaule</i>

In addition to the weeds controlled, the following weeds will be partially controlled or suppressed at 100 to 150 lb/acre (2 3 to 3 4 lb/1000 sq ft)

<b>Common Name</b>	<b>Scientific Name</b>
<i>carrot wild</i>	<i>Daucus carota</i>
<i>fleabane dwarf</i>	<i>Conyza ramosissima</i>
<i>groundsel common</i>	<i>Senecio vulgaris</i>
<i>mustard Indian</i>	<i>Brassica juncea</i>
<i>spurge prostrate</i>	<i>Euphorbia humistrata</i>
<i>woodsorrel yellow</i>	<i>Oxalis stricta</i>

**Application Rates, Frequency and Timing of Applications**

HELENA® XL 2G can be applied in the spring for summer annual grass and broadleaf weed control and in the fall for annual bluegrass (*Poa annua*) and winter annual broadleaf weed control

**Broadcast Application Rates (Warm Season Turfgrasses)**

Use Area	HELENA® XL 2G		Minimum Time Between Applications (months)	Total Amount Allowed Per Year (lb/acre)
	(lb/acre)	(lb/1000 sq ft)		
All regions	100	2 3	2	200
	150	3 4	3	300

**1 Summer Annual Grasses and Broadleaf Weeds**

**Single Application Program** Apply 150 pounds per acre of HELENA® XL 2G in late winter or early spring prior to the onset of conditions favorable for summer annual weed germination

**Split Application Program** As an alternative to a single application program HELENA® XL 2G may be applied in a split application This program is desirable when the initial application is made well in advance of weed germination and where weed control is desired for a longer period of time Apply 100 pounds per acre of HELENA® XL 2G in an initial application followed by a second application of 100 pounds per acre 8 to 10 weeks later

The second treatment of the split application may follow application of a different preemergence grass herbicide in place of the initial HELENA® XL 2G application

**2 Annual Bluegrass and Winter Annual Broadleaf Weeds**

Apply HELENA® XL 2G as a preemergence treatment in late summer or early fall prior to the expected germination period for annual bluegrass and winter annual broadleaf weeds Do not apply HELENA® XL 2G to areas where fall overseeding will occur If annual bluegrass infestation is severe and its elimination will result in thinning of turfgrass



cover apply **HELENA® XL 2G** at 100 pounds per acre If thinning of turfgrass cover is not a potential problem **HELENA® XL 2G** may be applied at 150 pounds per acre

In areas of heavy annual bluegrass infestation its elimination will result in temporary thinning of turfgrass cover Proper fertilization irrigation and soil incorporated reseeding should be employed to speed the restoration of desirable turfgrass cover in areas previously occupied by annual bluegrass (See section on reseeding)

**Application Directions**

Apply **HELENA® XL 2G** evenly over the turfgrass area Avoid spray pattern skips and overlaps that may result in incomplete coverage or over application For best results use application equipment designed to uniformly broadcast granular herbicides More uniform application may be achieved by spreading half the required amount of product over the area and then applying the remaining half in swaths at right angles to the first application Calibrate application equipment prior to use according to manufacturer's directions Check equipment frequently to make sure it is working properly and distributing granules uniformly

**Reseeding**

Herbicides that control annual weeds may also affect establishment of desirable turfgrass seedlings Reseeding should be delayed for at least 6 weeks following application of **HELENA® XL 2G** at the 100 pound per acre rate When using **HELENA® XL 2G** at the 150 pound per acre rate reseeding should be delayed 12 to 16 weeks after application When reseeding it is essential that proper cultural practices such as soil cultivation and seedbed preparation irrigation and fertilization be followed For satisfactory reseeding results following **HELENA® XL 2G** use the seeding rate should be increased and equipment designed to place seed in full contact with soil (such as the Rogers Aero Seeder) should be employed

**Spreader Settings**

(A guide for calibrating spreaders to apply **HELENA® XL 2G** in one pass over turf )

**Note** These settings are provided as suggested starting points in calibrating each individual spreader Since no two spreaders are alike these settings are intended only as a guide in beginning the calibration process

Spreader Type	Estimated Spreader Setting Necessary to Apply the Specified Rate of <b>HELENA® XL 2G</b> Per Acre In One Pass	
	100 lb/acre	150 lb/acre
<b>Cyclone</b>		
Models B1 33 96 BSSB at 200 ft/min	3 1/4	3 1/2
Model 100 at 200 ft/min	3 1/4	3 1/2
Model 93 (based on tractor speed of 4 mph)	5	6 1/4
Model 99 (based on tractor speed of 4 mph)	4 3/4	5 3/4-6
Model BPI (based on tractor speed of 4 mph)	4 1/2	5 1/4-5 1/2
<b>Gandy</b>		
Model 10A series 6 8 10 11 12 20 and 30 ft (based on tractor speed of 5 mph)	31	37
Model 10T series 6 8 10 11 12 20 and 30 ft (based on tractor speed of 5 mph)	33	40
Turf Tender 24 30 42 inch (based on tractor speed of 3 mph)	25	28
600 Series 2 4 and 5 ft (based on tractor speed of 3 mph)	18	22

<b>Lely</b> Model W and H (based on tractor speed of 4.5 mph)	3	4
<b>Lesco</b> Lesco Spreader (Note set 3rd adjustable hole 1 notch from "open")	D 1/2	F
<b>Scott</b> Rotary Model R-8 Drop Spreader	H 1/2 3 7/8	1 1/4 4 5/8
<b>Spyker</b> Spyker	3 2	3 6
<b>Vicon</b> Model 402 (with seed ring) swath width 20 ft 5 mph speed	24	28
<b>Warren</b> Model T-711 (based on ground speed of 3.0 mph)	3 1/4	4

**CONDITIONS OF SALE - LIMITED WARRANTY  
AND LIMITATIONS OF LIABILITY AND REMEDIES**

**Read the Conditions of Sale - Warranty and Limitations of Liability and Remedies before using this product. If the terms are not acceptable, return the product, unopened, and the full purchase price will be refunded.**

The directions on this label are believed to be reliable and ~~should~~must be followed carefully. Insufficient control of pests and/or injury to the crop to which the product is applied may result from the occurrence of extraordinary or unusual weather conditions or the failure to follow the label directions or good application practices, all of which are beyond the control of Helena Chemical Company (the "Company") or seller. In addition, failure to follow label directions may cause injury to crops, animals, man, or the environment. To the extent consistent with applicable law, the Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purpose referred to in the directions for use subject to the factors noted above which are beyond the control of the Company. To the extent consistent with applicable law, the Company makes no other warranties or representations of any kind, express or implied, concerning the product, including no implied warranty of merchantability or fitness for any particular purpose, and no such warranty shall be implied by law.

To the extent consistent with applicable law, the exclusive remedy against the Company for any cause of action relating to the handling or use of this product shall be limited to, at Helena Chemical Company's election, one of the following:

- 1 Refund of the purchase price paid by buyer or user for product bought or
- 2 Replacement of the product used

To the extent allowed consistent with applicable law, the Company shall not be liable and any and all claims against the Company are waived for special, indirect, incidental, or consequential damages or expense of any nature, including but not limited to, loss of profits or income. The Company and the seller offer this product and the buyer and user accept it subject to the foregoing conditions of sale and limitation of warranty, liability, and remedies.

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