

# Worker Protection Standards: Who and When Can Someone Enter a Treated and Untreated Area in Your Greenhouse?

Do you understand the rules correctly?

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Worker Protection Standards (WPS)(Code of Federal Regulations, Title 40, Part 170) were designed to protect agricultural worker and pesticide handlers (people mixing, loading, or applying pesticides or doing other task involving direct contact with pesticides) from any unnecessary exposure to pesticides that are being used in the production of agricultural crops. The pesticide label and the EPA's "How to Comply" are the best tools for clarification of the Law.

**What is the treated area?** The treated area is where we are directly applying a pesticide such as to the plants (foliar spray), to the soil (drench) or to the foliage and soil (sprench). If you are using a fogging system, the application area is the area the fog will be in contact with which maybe the walkways, benches ECT...

**Early Entry work includes:** hand labor tasks, working directly with the treated plants, soil or water is prohibited during early entry; or limited contact where tasks with minimal contact with plants, soil and water, this area is limited to feet, lower legs, hands and forearms.

WPS requires employers to provide to all employees:

1. Pesticide Safety Training-if you used a pesticide within 30 days with an REI, they must be trained before they enter or have contact with any treated material. Or before they accumulate 5 days in a treated area.
2. Information at a Central Location-WPS safety poster, application information, location of emergency medical facility.
3. Decontamination Supplies- water, soap, towels
4. Emergency Assistance-promptly makes emergency transportation available: by taking the employee, calling an emergency vehicle, or make sure the employee has a ride to the medical facility with someone else.

**Specific Guidelines for Early-Entry Workers:**

1. They must be WPS trained
2. They must understand Personal Protective Equipment (PPE) requirements.
3. They must be informed about safety instructions and offered to read the label of the pesticides with REI's required.

**This Document is designed to clarify the requirements to be compliant with WPS. I have included some of the pesticides used in Michigan Greenhouses.**

| Trade Name and EPA Registration number | REI     | PPE; for early-entry <b><u>with limited contact</u></b> to treated areas: plants, soil or water.  | Special Ventilation   | Entry to a non-treated area (plant, soil and water) with <b><u>NO CONTACT without</u></b> the PPE. Example walks through.  |
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| A-Rest<br>67690-2                      | 12-Hour | <ul style="list-style-type: none"> <li>• Coveralls</li> <li>• Chemical-resistant gloves made of any waterproof material</li> <li>• Shoes plus socks</li> </ul>  | None  | After the application  |
| Avid 0.15 EC<br>100-896                | 12-Hour | <ul style="list-style-type: none"> <li>• Coveralls over short-sleeved shirt and short pants</li> <li>• Chemical-resistant gloves – EPA chemical-resistance category B (e.g., barrier laminate or butyl rubber ≥14 mils)</li> <li>• Chemical resistant footwear plus socks</li> <li>• Protective eyewear</li> <li>• Chemical-resistant headgear for overhead exposure</li> </ul> | None, but required because applicator must wear a respirator. | After 10 air exchange. or<br>2 hrs of mechanical ventilation with fans, or<br>4 hrs using passive ventilation vents. or<br>11 hrs no vent followed by 1 hr mechanical ventilation, or<br>11hrs with no vent followed by 2 hrs passive ventilation or<br>24 hrs with no ventilation and |
| B-Nine WSG<br>400-478                  | 24-Hour | <ul style="list-style-type: none"> <li>• Coveralls over long-sleeved shirt and long pants'</li> <li>• Waterproof gloves</li> <li>• Chemical resistant footwear plus socks</li> </ul>  | None  | after the application  |
| Bonzi<br>100-996                       | 12-Hour | <ul style="list-style-type: none"> <li>• Coveralls</li> <li>• Chemical-resistant gloves made of any waterproof material, such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride or viton.</li> <li>• Shoes plus socks.</li> </ul>  | None  | after the application  |

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| Chipco 26019<br>N/G<br>432-889           | 12-Hour  | <ul style="list-style-type: none"> <li>• Coveralls,</li> <li>• Chemical-resistant gloves</li> <li>• Shoes plus socks</li> </ul>  | None, but required because applicator must wear a respirator. | after 10 air exchange. or<br>2 hrs of mechanical ventilation with fans,<br>or<br>4 hrs using passive ventilation vents. or<br>11 hrs no vent followed by 1 hr<br>mechanical ventilation, or<br>11hrs with no vent followed by 2 hrs<br>passive ventilation or<br>24 hrs with no ventilation |
| Cleary's 3336 WP<br>1001-63              | 12-Hour  | <ul style="list-style-type: none"> <li>• Coveralls</li> <li>• Chemical-resistant gloves made of any waterproof material</li> <li>• Shoes with socks</li> </ul>   | None  | If the product is applied by drenching, workers can enter the treated area if there will be no contact with anything that has been treated.   |
| Daconil-weather<br>Stik<br>50534-209-100 | 12-Hour<br>or 24 Hour<br>based on<br>ventilation | <ul style="list-style-type: none"> <li>• Coveralls</li> <li>• Chemical-resistant gloves made of any waterproof material</li> <li>• Shoes plus socks</li> <li>• Protective eyewear</li> </ul>   | None, but required because applicator must wear a respirator. | after 10 air exchange. or<br>2 hrs of mechanical ventilation with fans,<br>or<br>4 hrs using passive ventilation vents. or<br>11 hrs no vent followed by 1 hr<br>mechanical ventilation, or<br>11hrs with no vent followed by 2 hrs<br>passive ventilation or<br>24 hrs with no ventilation |
| Decree<br>66330-35-67690                 | 12-Hour  | <ul style="list-style-type: none"> <li>• Coveralls</li> <li>• Shoes with socks</li> <li>• Chemical-resistant gloves made of waterproof material.</li> </ul>  | None  | after the application   |
| Distance<br>59639-96                     | 12 hours   | <ul style="list-style-type: none"> <li>• Coveralls over short-sleeved shirt and short pants</li> <li>• Chemical-resistant gloves, such as Barrier Laminate or Viton &gt; 14 mils,</li> <li>• Chemical-resistant footwear plus socks,</li> <li>• Chemical-resistant headgear for overhead exposure</li> </ul> | None  | after the application   |

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| Duraguard ME<br>499-367  | 24-hour  | <ul style="list-style-type: none"> <li>• Coveralls over short sleeved shirt and short pants</li> <li>• Chemical resistant gloves made out of any waterproof material</li> <li>• Chemical resistant footwear plus socks</li> <li>• Chemical resistant headgear for over head exposure</li> </ul>     | None but required because applicator must wear a respirator.   | After 10 air exchange. or<br>2 hrs of mechanical ventilation with fans, or<br>4 hrs using passive ventilation vents. or<br>11 hrs no vent followed by 1 hr mechanical ventilation, or<br>11hrs with no vent followed by 2 hrs passive ventilation or<br>24 hrs with no ventilation and |
| Flagship 25WG<br>100-955 | 12-hour for foliar spray, drench or 24- hour based on auto cold fogger | <p>See special needs if automatic fogger: Other application methods requirements:</p> <ul style="list-style-type: none"> <li>• Coveralls</li> <li>• Chemical-resistant gloves made of any waterproof material – Category A (e.g., natural rubber ≥ 14 mils).</li> <li>• Shoes plus socks</li> </ul> | <p><b>Automatic Cold Fogger Use in Greenhouses</b></p> <ul style="list-style-type: none"> <li>• If there is no ventilation, the REI is 24 hours.</li> </ul> <p><b>Ventilation Criteria</b></p> <ul style="list-style-type: none"> <li>• Early entry is permitted (with the PPE and respiratory protection consisting of a protection factor (PF) 10 respirator fitted with an organic-vapor removing filter) after <ul style="list-style-type: none"> <li>• four (4) hours to perform <u>short duration activities</u> such as opening windows or turning on fans or ventilation systems.</li> </ul> </li> </ul> <p><b>Early Entry is permitted with PPE and no-respirator</b></p> <ul style="list-style-type: none"> <li>• after two (2) hours of ventilation using fans or other mechanical ventilation systems.</li> <li>• after four (4) hours of ventilation using vents, windows or other passive ventilation.</li> <li>• after ten (10) complete air exchanges</li> <li>• after 12 hours, if the greenhouse has been ventilated according to the above criteria, no PPE is required to enter the treated area.</li> </ul> | After application----<br>EXCEPT if Auto Cold Fogger is used see previous box.  |
| Florel<br>54705-8        | 48-Hours   | <ul style="list-style-type: none"> <li>• Coveralls over long-sleeved shirt and long pants</li> <li>• Chemical resistant gloves</li> <li>• Chemical resistant shoes plus socks</li> <li>• Protective eyewear</li> </ul>  | None   | After the application  |
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| Hurricane<br>100-951             | 48-hours | <ul style="list-style-type: none"> <li>• Coveralls over long-sleeved shirt and long pants</li> <li>• Socks and chemical-resistant footwear</li> <li>• Chemical resistant gloves made of water proof material</li> </ul> |      | Exception: If the product is applied by drenching, workers can enter the treated area if there will be no contact with anything that has been treated. Or other methods of application they can enter after application is finished |
| Marathon 60 WP<br>432-1361-59807 | 12 Hours | <ul style="list-style-type: none"> <li>• Long pants and long sleeve shirt</li> <li>• Water proof gloves</li> <li>• Shoes and socks</li> </ul>   | None | After the application   |
| Medallion<br>100-769             | 12-Hour  | <ul style="list-style-type: none"> <li>• Coveralls</li> <li>• Chemical-resistant gloves made from any waterproof material</li> <li>• Shoes plus socks</li> </ul>  | None | Exception: If the product is applied by drenching, workers can enter the treated area if there will be no contact with anything that has been treated. Or after application.  |
| Orthene TT&O 97<br>59639-91      | 24-Hour  | <ul style="list-style-type: none"> <li>• Coveralls</li> <li>• Waterproof gloves</li> <li>• Shoes plus socks</li> <li>• Chemical resistant head gear for overhead exposure.</li> </ul>                                   | None | After the application   |
| Overture<br>59639-125            | 12-Hour  | <ul style="list-style-type: none"> <li>• Coveralls</li> <li>• Waterproof gloves</li> <li>• Shoes plus socks</li> </ul>  | None | After the application   |
| Palladium<br>100-1328            | 12-Hour  | <ul style="list-style-type: none"> <li>• Coveralls</li> <li>• Chemical-resistant gloves made of any waterproof material</li> <li>• Shoes and socks</li> </ul>   | None | after the application   |
| Subdue Maxx<br>100-796           | 48-Hour  | <ul style="list-style-type: none"> <li>• Coveralls</li> <li>• Chemical-resistant gloves made of any waterproof material</li> <li>• Shoes and socks</li> </ul>   | None | There is no restricted-entry interval (REI) requirement following soil injection, soil incorporated, or a soil drench application to ornamentals. If other method of application: after application is completed without contact.   |
| Sumagic<br>59639-37              | 12-Hour  | <ul style="list-style-type: none"> <li>• Coveralls</li> <li>• Chemical-resistant gloves made of any waterproof material</li> <li>• Shoes and socks</li> </ul>   | None | After the application   |

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| Terraguard SC<br>4400-521   | 12-Hour                                 | <ul style="list-style-type: none"> <li>• Coveralls</li> <li>• Chemical-resistant gloves made of any waterproof material</li> <li>• Shoes and socks</li> </ul>   | None  | Exception; if the product is soil-injected or soil-incorporated, workers can enter the treated area if there is no contact with anything being treated. |
| Terrazole 35 WP<br>400-416<br>No longer for Sale in Michigan, Use up current inventory. | 12-Hour or 24 Hour based on ventilation | <ul style="list-style-type: none"> <li>• Long-sleeved shirt and long pants</li> <li>• Chemical resistant gloves such as barrier laminate or viton</li> <li>• Shoes plus socks</li> <li>• NIOSH approved respirator with an organic-vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G) or a NIOSH approved respirator with an OV cartridge or canister with and N, R, P or HE prefilter</li> </ul> | One of the criteria is met: 10 air exchanges; 2 hours of fans or other mechanical ventilation providing outside air; 4 hours of passive ventilation of vents, windows; 11 hours with no ventilation followed by 1 hour of mechanical ventilation 11 hours of no ventilation followed by 2 hrs passive ventilation 24 hours with no ventilation. | After all air exchange criteria is met.   |
| Terrazole L<br>400-422-59807  | 12-Hour or 24 Hour based on ventilation | <ul style="list-style-type: none"> <li>• Long-sleeved shirt and long pants</li> <li>• Chemical resistant gloves such as barrier laminate or viton</li> <li>• Shoes plus socks</li> <li>• NIOSH approved respirator with an organic-vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G) or a NIOSH approved respirator with an OV cartridge or canister with and N, R, P or HE prefilter</li> </ul> | One of the criteria is met: 10 air exchanges; 2 hours of fans or other mechanical ventilation providing outside air; 4 hours of passive ventilation of vents, windows; 11 hours with no ventilation followed by 1 hour of mechanical ventilation 11 hours of no ventilation followed by 2 hrs passive ventilation 24 hours with no ventilation. | After all air exchange criteria is met.   |

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| <i>Trade Name and EPA Registration number</i> | <i>REI</i> | <i>PPE; for early-entry <b>with limited contact</b> to treated areas: plants, soil or water.</i> | <i>Special Ventilation</i> | <i>Entry to a non-treated area (plant, soil and water) with <b>NO CONTACT without</b> the PPE. Example walks through.</i> |
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