



# Pesticide Mixing and Loading Pad Module

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## Introduction

In the early 1990's professionals from Michigan's agricultural industries including turfgrass industry representatives, worked with environmental groups, citizen groups and the Michigan Department of Agriculture to construct a set of rules to describing the use of pesticides by commercial applicators. The result of this effort was a package of 16 rules commonly referred to as Regulation 637. It was enacted October 29, 1992 and is currently contained in Public Act 451 Natural Resources and Environmental Protection Act.

This module will describe the mixing and loading pad rules and help you assess whether you are required to have a pad. In addition to measuring compliance, this module is also designed to evaluate your mixing and loading operation for its level of pollution prevention. Commercial pesticide application is generally recognized as the application of pesticides on the property of another as a routine work assignment or pesticide applications that are hired by the property owner for use on their land. This includes applications on school grounds, golf courses, parks and all applications conducted by lawn care companies.

## Determining Pad Requirements

The first section will determine whether you are required to have a mixing and loading facility.

1. \_\_\_ Yes \_\_\_ No Are you considered a commercial applicator by the MDA ?
2. \_\_\_ Yes \_\_\_ No Do you mix, load, or transfer pesticides for more than 10 days in a calendar year?

A “spray day” is considered to be a 24-hour period in which pesticides are applied. Multiple loads of pesticide product applied during that 24-hour period is still considered one day of spraying.

Transfer of pesticides includes transfer from one container to another or transfers between a nurse tank and a sprayer.

3. \_\_\_ Yes \_\_\_ No Is the mixing and loading conducted on the same site for more than ten days?

A “site” is considered to be a ½ mile in radius. Any mixing, loading, or transferring of pesticides between containers within that ½ mile radius is considered to be on the same site.

4. \_\_\_ Yes \_\_\_ No Is the application equipment you use something **other than** “hand-held” apparatus?

Hand held equipment includes hand can pump sprayers, backpack sprayers, or push spreaders. These devices are exempt from mixing/loading pad requirements.

If you answered “yes” to all four questions above, you are required to have a mixing and loading pad on the work site. According to Regulation 637, mixing and loading pads were required to be in place by October 29, 1993.

If you answered “no” to any of the questions, you are exempt from pad requirements because you do not mix, load or transfer more than ten days during the year on the same site, or you **only use** hand-held equipment.

## Determining Pad Requirements Section Summary

Check appropriate line:

\_\_\_\_\_ I am required to have a mixing and loading pad but I do not have one in place.

\_\_\_\_\_ I am required to have a mixing and loading pad and I have one in place.

\_\_\_\_\_ I am not required to have a mixing and loading pad.

## Mixing / Loading Pad Size and Operating Procedures

Each question in the following section has reference to a portion in the regulation. A “yes” answer indicates that you have complied with that area of the regulation while a “no” answer indicates that you are out of compliance.

1.  Yes     No    If you have an outside pad is it cleaned after use so that residues will not be found in rainwater or is the pad designed to hold a 6 inch rainfall?
2.  Yes     No    To prevent release of pesticides to the environment, is the pad (outside or inside) berm, curb, slope, or otherwise design to contain spills, leaks, releases or other discharges?
3.  Yes     No    Is the pad constructed with impervious materials and free of unsealed cracks?  
  
There are many materials available that are considered impervious.  
  
They include plastics, fiberglass, sealed concrete and stainless steel.
4.  Yes     No    Can the pad catch a one minute discharge from the mixing / loading operation?  
  
As a minimum, the pad is required to contain one minute of discharge. This should be figured from the highest output device within in the system, which is usually the fill pipe. For most golf operations, the containment area can hold the size of the entire spray tank.
  - To calculate the amount (gallons) held by a particular pad:  
Figure the cubic feet of the pad -  $L \times W \times H = \text{Cubic ft.}$   
 $\text{Cubic Feet} \times 7.5 = \text{Total gallons held by pad}$
  - To calculate the cubic feet of space required by a specific amount of liquid such as your spray tank.  
 $\text{Gallons liquid} \times .134 = \text{Cubic feet equivalent}$
5.  Yes     No    Is the material collected on the pad either contained on the pad or transferred to another impervious, above ground holding tank until used or properly disposed?
6.  Yes     No    Do you have a spill kit available on the sprayers and in the mixing and loading area?  
  
A spill kit means a portable kit or other equipment that will recover, minimize, contain, or absorb spills, leaks, releases, or other discharges.

7.  Yes  No Is there a primary shutoff valve located within immediate reach of the operator?
8.  Yes  No Is there an emergency valve located upstream of the primary shut off valve positioned within 30 seconds of the operator?
9.  Yes  No I there a properly functioning anti-siphoning device on all water drawing equipment? A simple anti-siphon system is to create an air gap between the fill pipe and the sprayer tank.
10.  Yes  No Does someone attend the equipment the entire time it is being filled?
11.  Yes  No Are containers closed immediately after each use to prevent spills?
12.  Yes  No Are pesticide containers triple or power rinsed after being emptied?
13.  Yes  No Are empty pesticide containers stored in a secured area until they can be recycled or properly disposed of according to label directions?
14.  Yes  No Does the person who is mixing and loading read the entire pesticide label prior to actually opening and handling the formulated product?
15.  Yes  No Does the person who is mixing and loading wear all the necessary PPE?
16.  Yes  No Do applicators wear additional PPE when the likelihood of pesticide exposure exists?
17.  Yes  No When pouring pesticides from the container, does the person keep the container below eye level when specified on the label?

**Pad Size and Operating Procedures Section Summary**

Mixing/Loading Pad Size and Operating Procedures Section Summary

I am in total compliance with the above portions of the regulation.

I am not in compliance with all of the above portions of the regulation.

Please list the areas that are not in compliance and areas that you would like to improve:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

## Washing, Rinsing & Managing Pesticide Containing Materials

Another rule in Regulation 637 is dedicated toward the washing of pesticide application equipment or where pesticide-containing materials are washed or rinsed. There are clear definitions regarding these materials and activities.

**"Wash water"** means water that is used to wash exterior surfaces of application, handling, storage or transportation equipment where pesticide residues are likely to occur.

**"Pesticide-containing material"** means any of the following:

- Any container of a pesticide product that has not been properly rinsed.
- Any rinsate that is derived from a pesticide container, application equipment, or equipment washing.
- Any material that is used to collect or contain excess or spilled pesticide or rinsate.
- Any mixture of pesticide and diluents such as wash water, rinse water or rainwater.
- Material that is generated as a result of contact with a pesticide in an application, containment, recovery, reuse or treatment system. It does not include personal protective equipment that contains pesticide residue.

If you are a commercial applicator by MDA definition, and your sprayer contains residues on the outside surfaces, and you wash it more than ten days during the calendar year, then you are required to have a wash/rinse pad. This pad has the same specifications as the mixing loading pad and they are considered to be one in the same.

Any materials that contain pesticide residues like wash water, spill recovery materials and rinsates are considered "pesticide containing materials". These materials may be applied onto labeled sites according to label directions.

1.  Yes  No If you wash spray devices more than ten days in a calendar year, do you have a containment pad?

Not applicable

2.  Yes  No Do you store pesticide containing materials and dispose of them properly or use them on a labeled site according to label directions? (See definition of pesticide containing material above)

Not applicable

### Washing, Rinsing Section Summary

#### Washing, Rinsing and Managing Pesticide Containing Materials

If you answered “no” to question 1 or 2, what improvements would you like to make in either or both areas?

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_