

# MU Guide

## Temperature Effects on Storage of Greenhouse, Ornamental and Turf Pesticides

Fred Fishel, Department of Agronomy

Temperature extremes in the pesticide storage facility pose several problems. The normal temperature range recommended for storing liquid pesticides is usually 40 to 100 degrees Fahrenheit, although some pesticide labels state a specific temperature range for maintaining optimal shelf life. The purpose of this guide is to provide a quick reference for specific storage information and temperature requirements, if relevant, for many commonly used greenhouse, ornamental and turf pesticides.

Temperature extremes in storage can reduce the effectiveness of pesticides. Freezing of liquid pesticides can result in the active ingredients separating from the solvents or emulsifiers, which may lead to crystallization or coagulation of the pesticide. Some pesticides may be thawed and reused after being frozen by rolling, shaking or otherwise agitating the container to resuspend its contents. Call the manufacturer for advice on reusing specific pesticides that have frozen. Also note that the freezing point of many pesticides is lower than 32 F due to the hydrocarbon solvents and inert ingredients present. At the other extreme, excessive heat can cause pesticides to volatilize and drift away from the storage site. Some pesticides are flammable.

Temperature extremes can also damage the integrity of the pesticide container. Freezing temperatures can cause glass, metal and plastic containers to break. High temperatures can cause plastic containers to melt and glass containers to explode.

As a rule, wettable powders and granules are not affected by low temperatures. Moisture is the greatest factor affecting their storage as it can cause caking that may reduce the effectiveness of the pesticide. Products formulated in water-soluble packets have a high affinity for moisture and become brittle when frozen. Brittle packets may break open when handled, so store these products in a warm, dry area.

Before storing pesticides, read the "storage and disposal" section of the pesticide label. Many pesticide labels provide specific storage information. The following precautions should be used in the storage of all pesticides:

- Do not store near heat, sparks or open flame.
- Do not contaminate other pesticides, fertilizer, water, food or feed by storage.
- Keep containers tightly closed, dry and at a moderate temperature in a locked, well-ventilated place that is out of the reach of children.
- Store products in original containers only.

If storage information cannot be found on the label, contact the manufacturer of the pesticide. The following information was taken from the "storage and disposal" section of the respective pesticide labels.

## Fungicides

Product	Comments
Basamid Granula	Do not store above 95 F.
Bayleton 50	Do not store below 32 F.
Camelot	Preferably store above 32 F.
Dithane (T/O and Rainshield formulations)	Do not allow to become wet or overheated.
Flowable Mancozeb	Do not store below 32 F.
Fore	Do not allow to become wet or overheated.
Fore FlowXL	Do not store below 32 F. Do not allow to become overheated.
Fungo 50 WSB	Do not store above 122 F. Do not allow to become wet or overheated.
Mancozeb DG	Do not allow to become wet or overheated.
Plantvax 75WP	Store in a dry location.
Rubigan AS	Avoid freezing.
Subdue 2X WSP	Store in a cool, dry place.
Systemic Fungicide	Do not store below 32 F.
Sythane WSP	Do not store below 40 F.
Triact 70	Do not store below 40 F.
TwoSome Flowable	Avoid freezing.

## Insecticides

Product	Comments
Astro	Do not store below 40 F.
Azatin XL	Do not store above 100 F or below -20 F.
Battle GC	Protect from freezing.
Conserve SC	Avoid freezing.
DeltaGard GC 5SC	Avoid extremes in temperatures.
DeltaGard T&O 5SC	Avoid extremes in temperatures.
Dursban 2 Coated Granules	Avoid excess heat.
Dursban 50W	Do not store above 122 F for extended periods.
Dursban Pro	Do not store above 122 F for extended periods. Preferred storage is above 32 F.
Gnatrol	Store between 59 and 86 F
Marathon 60 WP	Do not store below 32 F
PYRIGO	Do not store above 122 F.
Pinpoint 15G	Protect from excessive heat.
Professional Pest Control Dursban 0.5G	Do not store above 100 F for extended periods.
Scimitar GC	Protect from freezing.
Scimitar WP	Do not store below 32 F.
Sevin 6.3G	Do not store above 100 F.
Sevin 80 WSP	Do not store above 100 F.
Sevin SL	Do not store above 100 F.
Tempo 20 WP WSP	Do not store below 32 F.
Triact 70	Do not store below 40 F.

## Herbicides

Product	Comments	Product	Comments
Acclaim Extra	Do not store above 100 F or below 10 F.	Momentum Premium	Store at temperatures above 28 F or agitate before using.
Atrazine 4L	Do not store below 0 F.	Outrider	Do not store above 120 F. Do not store under moist conditions.
Basagran T/O	Do not allow to freeze.	Pendulum 2G	Do not store above 120 F.
Basamid Granular	Do not store above 95 F.	Pendulum 3.3 EC	Do not store below 40 F.
Bensumec	Protect from temperatures below 42 F.	Pendulum WDG	Do not store above 120 F.
Bentgrass Selective	Do not store below 32 F.	Pre-M 3.3 EC	Do not store below 40 F.
Campaign	Do not store below 40 F.	Pre-M 60 DG	Do not store above 120 F.
Chaser	Do not store below 10 F.	Prograss	Do not store below 34 F.
Chaser 2 Amine	Do not store below 28 F.	Reward L&A	Do not store below 32 F.
Confront	Do not store below 28 F.	Reward LS	Do not store below 32 F.
Dimension	Do not store below 32 F.	Super Trimec	Keep from freezing.
Drive 75 DF	Do not store under dampness or high humidity.	Three-Way Selective	Keep from freezing.
Eliminate Liquid	Do not store below 32 F.	Tri-Power Selective	Do not store below 32 F.
Four Power Plus	Do not store below temperature of 35 F.	Triamine	Do not store below 32 F.
Gallery 75 DF	Do not store above 120 F. Do not store in direct sunlight.	Triamine II	Do not store below 32 F.
Goal 2XL	Do not store below 32 F.	Trimec Classic	Keep from freezing.
Horsepower	Do not store below 32 F.	Trimec Classic DSC	Exposure of the water soluble bags to moisture prior to mixing may cause the water soluble bag to rupture.
Illoxan 3EC	Do not store below 20 F.	Trimec Plus	Keep from freezing.
Image 1.5 LC	Do not store below 32 F.	Triplet	Do not store below 32 F.
Image Consumer Concentrate	Do not store below 32 F.	Triplet Sensitive	Do not store below 32 F.
Kerb WSP	Do not store below 32 F.	TruPower	Store at temperatures above 32 F. If allowed to freeze, remix before using.
Lescogran	Do not allow product to freeze.	Turflon Ester	Do not store below 28 F.
MCP-4K	Do not store below 32 F.	Vantage	Do not store below 32 F or above 100 F.
MCP-4 Amine	Do not store below 32 F.		
Manage	Do not store above 120 F. Do not store under moist conditions.		
Millenium Ultra	Do not store below 32 F.		



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