

# Garlon® 3A Herbicide:

## *Supplement to Bulk Storage and Handling Guide*

This product-specific information supplements the Dow AgroSciences “Bulk Storage and Handling Guide”. Use these documents together to understand the requirements for a bulk storage facility of this product.

The Bulk Storage and Handling Guide is available at <http://www.dowagro.com/rc/steward/handling.htm>

<b>General Storage Comments</b>								
Garlon 3A herbicide handles well in bulk. Crystallization is not generally an issue, although there is a recommended minimum storage temperature. The 110°F flash point makes it a combustible liquid; thus fire code dictates a number of storage requirements including emergency venting, venting to outside of buildings, and a non-combustible bulk tank.								
<b>Product Density vs. Temperature</b>								
Temperature °F ( °C )	20 (-7)	30 (-1)	40 (4)	50 (10)	60 (16)	70 (21)	80 (27)	90 (32)
Density (lb./gal.)						9.4		
<b>Flash Point, NFPA Rating, Storage Temperature, and Signal Word</b>								
Flash Point l °F (°C)	NFPA 704 Diamond Ratings			Min. Storage Temperature °F ( °C )		EPA Signal Word		
	Health	Flammability	Reactivity					
110 (43)	3	2	0	28 (-2)		Danger		
May form crystals if stored below minimum storage temperature or solvent is allowed to evaporate. If crystals form, circulate tank contents until crystals are dissolved.								
<b>Material / Product Compatibility</b>			<b>Rating</b>	<b>Comment</b>				
Mild Steel, Stainless Steel			OK	Essentially non-corrosive.				
Buna-N, EPDM, Silicone Rubber, Polyethylene (Cross-linked, Low & High Density, HMW), Polypropylene, Rigid PVC, Teflon			OK	Little to no effect.				
Viton, Nylon 6/6			OK	Swells slightly.				
Neoprene, Plasticized PVC			OK	Shrinks slightly.				
Copper, Yellow Brass			Caution	Slightly corrosive.				
Vellumoid			No	Swells moderately. Severe weight gain.				
Aluminum, Tin, Zinc			No	Corrosive.				
<b>Bulk Tank Material of Construction and Requirements</b>								
Material of Construction	Stainless steel is preferred. Polyethylene bulk tanks are not allowed due to National Fire Protection Association Code 30 “Flammable and Combustible Liquids Code”. Do not use aluminum.							
Venting Requirements	<b>Self-closing ERV capability<sup>2</sup> and PVRV required</b> due to flash point. Indoor tanks must have ERV and PVRV piped to outside the building.							
Couplers	Standard 2” Kamlok <sup>3</sup> Style Adapter with cap for receiving bulk deliveries.							

<sup>1</sup> The flash point of a liquid is the minimum temperature at which it gives off sufficient vapor to form an ignitable mixture with the air near the surface of the liquid or within the test vessel used.

<sup>2</sup> Size of the ERV should be determined using NFPA 30 Flammable and Combustible Liquids Code, or other appropriate code.

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Mixing Requirement	Does not require mixing under normal storage. The active ingredient is in solution and may crystallize below the minimum storage temperature. If maintained above minimum storage temperatures, these products do not require tanks with circulation capability. If crystals form, wait until temperatures are above 40°F, then circulate until crystals are dissolved
<b>Refillable Container Handling</b>	
DOT	This product is regulated by US Department of Transportation for various modes of transport. Use only UN/DOT approved containers.
Material of Construction	Stainless steel is preferred. Polyethylene refillable containers allowed. Mild steel tanks are allowed.
Mixing	The active ingredient is in solution and may crystallize below the minimum storage temperature. If maintained above minimum storage temperatures, these products do not require tanks with circulation capability. If crystals form, wait until temperatures are above 40°F, then circulate until crystals are dissolved
Couplers	Standard couplers.

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