

Lorsban[®] Advanced Insecticide: 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>

General Storage Comments

Lorsban Advanced is a milky white, emulsion in water formulation that has significant storage advantages over low flash point solvent formulations.

Cholinesterase Monitoring

Cholinesterase is an enzyme found in the blood and the central nervous system. Like other organophosphates, chlorpyrifos inhibits the action of cholinesterase.

Because of this, Dow AgroSciences recommends that personnel who handle or work with chlorpyrifos occasionally (as opposed to those who work with it daily) have their blood cholinesterase levels (both plasma and red cell) measured before beginning any work with this material. The purpose of this is to establish a baseline unique to each person. Subsequent blood (plasma) cholinesterase levels should be measured annually and immediately after any significant exposure has occurred.

For additional information, please contact Dow AgroSciences Occupational Health at (317)-337-7300 and request the booklet "Cholinesterase Testing Guideline For Chlorpyrifos".

Product Density vs. Temperature

Temperature °F (°C)	20 (-7)	30 (-1)	40 (4)	50 (10)	60 (16)	70 (21)	80 (27)	90 (32)
Density (lb./gal.)		9.46	9.43	9.39	9.36	9.33	9.29	9.26

Flash Point, NFPA Rating, Storage Temperature, and Signal Word

Flash Point °F (°C)	NFPA 704 Diamond Ratings			Min. Storage Temperature °F (°C)	EPA Signal Word
	Health	Flammability	Reactivity		
>212 (>100)	2	1	1	25 (-4)	Warning

Lorsban Advance insecticide may freeze below 20 F, at which point it becomes solid and unpumpable. No detrimental issues have been observed when the product is thawed.

Material / Product Compatibility	Rating	Comment
304 and 316 Stainless Steel, Aluminum, Tin	OK	Non-corrosive
Mild Steel,	OK	OK for most applications. Slight corrosion in liquid phase.
Copper, Yellow Brass, Zinc	OK	OK for most applications. Moderate corrosion in liquid phase.
Viton, Teflon, Nylon, Polypropylene, Polyethylene (high density and cross linked), Plasticized PVC (Tygon).	OK	
Polyethylene (low density)	OK	OK for most applications. Swells slightly. Must be fluorinated for long term storage.
Vellumoid Gasketing	Caution	OK for some applications. Shrinks moderately.
EPDM	Caution	OK for some applications. Swells moderately.
Buna N, Neoprene, Silicone Red Rubber, Rigid PVC	No	DO NOT USE. Severe swelling or deterioration.

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Bulk Tank Material of Construction and Requirements

Material of Construction	Stainless steel is preferred. A code rating is not required. Polyethylene tanks are discouraged due to durability. However, if used, they must be new due to potential permeation by previous products. NOTE: The previous product may not be a herbicide.
Venting Requirements	Tanks must have self-closing working vents (Pressure/Vacuum Relief Vent).
Couplers	Standard couplers are acceptable.
Mixing Requirement	Crystallization or separation has not been an issue; however, circulation capability is required.

Refillable Container Handling

DOT	This product is regulated by US Department of Transportation for various modes of transport. Use only UN/DOT approved containers.
Material of Construction	Must be DOT Packing Group III or better. Stainless steel preferred, poly is allowed. NOTE: <u>The previous product may not be a herbicide.</u>
Mixing	Crystallization or separation has not been an issue; although long term storage in refillable containers is not recommended.
Couplers	Standard couplers are allowed.

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010-41766 M45368001 (01/09)



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