

# SANITATION TABLE



1-888-791-2223

Greenhouse & nursery cleaning, sanitizing and disinfection – Products available at GHL inc. ([www.ghlinc.com](http://www.ghlinc.com))

Prevention; the key to a good strategy! Many factors influence greenhouse production success. Environmental factors, among others, can have a serious impact and the primary way to control them is through a good sanitation program.

One of the most fundamental points is prevention, by cleaning and disinfecting both prior to, and during the production process. Also, sanitation is becoming more and more a priority with consumers, making it more and more essential to the producers to ensure success through a good sanitation program.

Polyethylene, polycarbonate & glass	Plastic ground-cover, cultivation gutters	Cold room, greenhouse structure and buildings	Concrete floor	Trailers, trucks and transport lifts	Wrapping equipment and harvesting containers	Knives, pruning shears, work tools	Plastic pots, cultivation and harvesting containers	Entrances, boots, cart wheels, fork-lift trucks	Water pipes	Water tanks	Fruit treatment when wrapping	Wells	Main water entry and maintaining sanitary water quality
Better light transmission obtained by maintaining deposit-free panels.	Sanitary environment maintained through cleaning and disinfection of gutters and tiles.	When premises and cold rooms are properly cleaned and sanitized, this allows for a healthier work environment for worker as well as extending produce shelf life.	Concrete floors are one of the most significant vectors for disease as well as a potential safety hazard due to slippage caused by algae formation on the surface.	All transport vehicles must be kept clean and sanitary during their use.	Maintaining cleanliness and sanitation of produce preparation equipment. Essential for ensuring that produce is shipped to market fit for consumption.	Work tools should be sanitized between each use.	Work containers must be sanitized between each use.	You make significant efforts to maintain sanitary premises. It is essential to protect your premises from any outside contamination.	Removal of calcium scale, biofilm destruction, cleaning of deposits and destruction of ferrous bacteria. It is important to keep plumbing sanitary.	Removal of calcium scale, biofilm destruction, cleaning of deposits. It is important to keep water clean and sanitary at all times.	This treatment ensures that wholesome fruits are shipped to their final destination.	Drinking water maintenance. It is important to keep water sanitary at all times	Drinking water maintenance. It is important to keep water sanitary at all times.

## 1<sup>st</sup> step - CLEANING PRODUCTS

ADHERE NC Methods: A • D • F Dilution: 10 to 20 ml/L	PENBLITZ 228M OR BIO-EZE 3 Methods: A • D • F Dilution: 20 to 50 ml/L	PENBLITZ 228M OR BIO-EZE 3 Methods: A • D • F Dilution: 20 to 50 ml/L	PENBLITZ 228M OR BIO-EZE 3 Methods: A • D • F Dilution: 20 to 50 ml/L	PENBLITZ 228M OR BIO-EZE 3 Methods: A • D • F Dilution: 20 to 50 ml/L	PENBLITZ 228M OR BIO-EZE 3 Methods: A • C • D • F Dilution: 20 to 50 ml/L	PENBLITZ 228M OR BIO-EZE 3 Method: C Dilution: 20 to 50 ml/L	PENBLITZ 228M OR BIO-EZE 3 Method: C Dilution: 20 to 50 ml/L	PENBLITZ 228M OR BIO-EZE 3 Method: C Dilution: 20 to 50 ml/L	PENBLITZ 228M OR BIO-EZE 3 Methods: A • D • F Dilution: 20 to 50 ml/L	FOAMCHEK Method: E Dilution: 10 to 20 ml/L	FOAMCHEK Methods: A • D • E • F Dilution: 10 to 20 ml/L	RIDSTONE Methods: A • D • E • F Dilution: 10 to 50 ml/L	
<b>Frequency:</b> - 1 or 2 times a year, depending on appearance of algae and dirt.	<b>FOAMCHEK</b> Methods: A • D • F Dilution: 10 to 20 ml/L  <b>Frequency:</b> - At year-end sanitation (Empty greenhouse).	<b>SPECIAL 10</b> Methods: A • D • F Dilution: 10 ml/L  <b>ADHERE NC</b> Methods: A • D • F Dilution: 10 to 20 ml/L  <b>Frequency:</b> - Once a week in cold rooms. - 1 to 2 times a year in working areas or on structures. - More often as needed.	<b>Frequency:</b> - Once a day. - More as needed.	<b>SPECIAL 10</b> Methods: A • D • F Dilution: 10 ml/L  <b>Frequency:</b> - Once a week for frequently used carts. - Before use for occasionally used carts. - More often as needed.	<b>SPECIAL 10</b> Methods: A • C • D • F Dilution: 10 ml/L  <b>Frequency:</b> - At each use.	<b>Frequency:</b> - Before each use.	<b>SPECIAL 10</b> Method: C Dilution: 10 ml/L  <b>Frequency:</b> - Before each use.	<b>Frequency:</b> - Before each use.	<b>Frequency:</b> - Entry cleaning once a week - More as needed.	<b>Frequency:</b> - At year-end sanitation (Empty greenhouse)	<b>Frequency:</b> - At year-end sanitation (Empty greenhouse)	<b>Frequency:</b> - At year-end sanitation (Empty greenhouse), to remove calcium deposit.	



## 2<sup>nd</sup> step - SANITIZING / DISINFECTANT PRODUCTS

TERAMINE NR BF Methods: A • B • D • F Dilution: 2 ml/L	TERAMINE NR BF Methods: A • B • D • E • F Dilution: 2 ml/L	TERAMINE NR BF Methods: A • B • D • F Dilution: 2 ml/L	TERAMINE NR BF Methods: A • B • D • F • I Dilution: 2 ml/L	TERAMINE NR BF Methods: A • D • F Dilution: 2 ml/L	TERAMINE NR BF Methods: A • C • D • F Dilution: 2 ml/L	TERAMINE NR BF Method: C Dilution: 2 ml/L	TERAMINE NR BF Method: C Dilution: 2 ml/L	TERAMINE NR BF Method: C Dilution: 2 ml/L	FOAM-IT BF Methods: G • H Dilution: 10 ml/L <i>*see note 1</i>	TERAMINE NR BF Method: E Dilution: 2 ml/L	TERAMINE NR BF Methods: A • D • E • F Dilution: 2 ml/L	HYPER SAN BFVA Method: C Dilution: 4 ml/L (For normal treatment) <i>*see note 1</i>	DUTRION BFVA Method: J Dilution: Depending on water volume and well size. Contact a GHL representative.	DUTRION BFVA Method: E Dilution: 0.2 to 0.8 PPM
<b>BIO-SAN BF</b> Methods: A • B • D • F Dilution: 7 ml/L  <b>Frequency:</b> - Once a year, at each cleaning.	<b>BIO-SAN BF</b> Methods: A • B • D • E • F Dilution: 7 ml/L  <b>Frequency:</b> - At year-end sanitation (Empty greenhouse).	<b>BIO-SAN BF</b> Methods: A • B • D • F Dilution: 7 ml/L  <b>Frequency:</b> - Once a week in cold rooms. - 1 to 2 times a year in working areas or on structures. - More often as needed.	<b>BIO-SAN BF</b> Methods: A • B • D • F • I Dilution: 7 ml/L  <b>Frequency:</b> - Once a day. - More as needed.	<b>HYPER SAN BFVA</b> Methods: A • D • F Dilution: 4 ml/L (Normal treatments) or 16 ml/L (Shock treatment) <i>*see note 1</i>  <b>Frequency:</b> - Once a week for frequently used carts. - Before use for occasionally used carts. - More often as needed.	<b>HYPER SAN BFVA</b> Methods: A • C • D • F Dilution: 4 ml/L (Normal treatments) or 16 ml/L (Shock treatment) <i>*see note 1</i>  <b>Frequency:</b> - At each use.	<b>Frequency:</b> - Before each use.	<b>Frequency:</b> - Before each use.	<b>Frequency:</b> - Before each use.	<b>Frequency:</b> - Continuously with automatic system. - 3 times a day with boot dip mats.	<b>Frequency:</b> - At year-end sanitation (Empty greenhouse).	<b>Frequency:</b> - At year-end sanitation (Empty greenhouse).	<b>Frequency:</b> - During fruit preparation and wrapping.	<b>Frequency:</b> - Twice a year. Once at the beginning of the hot season, once at the end of the hot season. - More often as needed.	<b>Frequency:</b> - Continuously.



Product	Description	Certification	Material to avoid	WHMIS class(es) and safety equipment	Safety warning
ADHERE NC	Alkaline cleaner that forms a gel when dissolved in water, allowing it to adhere to vertical surfaces.		Aluminium, brass, copper and galvanized metals.		
BIO-EZE 3	Biodegradable foaming alkaline degreaser.		May discolor copper and aluminium after prolonged contact, even if diluted.		
FOAMCHEK	Low foaming acid cleaner.		Do not leave this product in contact with steel or galvanized steel for prolonged periods.		
PENBLITZ 228M	High performance foaming alkaline cleaner, caustic free.		Copper		Avoid any direct contact of product with humans, animals or plants.
RIDSTONE	Powerful, high foaming acid cleaner, mild odor, adheres to vertical surfaces.		Glass surfaces, steel, iron, galvanized steel.		
SPECIAL 10	Chlorinated non-foaming alkaline cleaner designed for recirculating cleaning systems. Safe for use on stainless steel or aluminium when diluted.		Copper and galvanized steel.		

Product	Function	Approval / Certification	Use	Legal notice	WHMIS class(es) and safety equipment	Safety warning
BIO-SAN	Bactericide, fungicide	Disinfectant DIN 02309520	Sanitation of hard surfaces, tools and structures.	These products are sanitizers/disinfectants and not pesticides and should not be used as such. The use of these products for phytosanitation (Meaning the use directly on plants to eliminate harmful pathogens) is prohibited.		Avoid concentrated product contact with humans, animals or plants.
FOAM-IT	Bactericide, fungicide	Sanitizer				
HYPER SAN	Bactericide, fungicide, algicide, virucide	Sanitizer				
TERAMINE NR	Bactericide, fungicide	Disinfectant DIN 02012294	Drinking water treatment.			
ACQUON	Bactericide, fungicide, algicide, virucide	NSF / ANSI 60 #C06028762 - 02				
DUTRION	Bactericide, fungicide, algicide, virucide	NSF / ANSI 60 #C06028762 - 02				

EVALUATION OF SOLUTION CONCENTRATIONS				
Some products/equipment are available to evaluate active ingredient concentration in your solution or to detect organisms' presence (Protein detection) on your surfaces. Here are some examples:				
Active ingredient to test	QUATERNARY AMMONIUM	CHLORINE DIOXIDE	PROTEINS	
Equipment	Testing stripes	Colorimeter	Titration kit	Pro-clean swab (Pathogens detection / Disinfection confirmation)
Picture				

Description		ADDITIONAL INFORMATIONS	
Where to find	Open link	Where to find	Open link
HortiContact	Technical support group on use of West Penetone products in greenhouse and nursery.	Subscribe to "HortiContact", the social network of professionals of vegetable and ornamental crop productions. <a href="http://www.horticontact.ghlinc.com">http://www.horticontact.ghlinc.com</a> and join the group "Support Phytosanitaire" to ask your questions directly to advisers.	
VDS NOUVELLES GHL	To be informed by e-mail of the latest news and novelties about cleaning, sanitizing or disinfection products or use of products.	Subscribe to "GHL NEWS" newsletter and check "ADVISE" and "NEW" categories to be updated on advice and news products from GHL, including cleaning and disinfection products.	
West Penetone	Website of the cleaning, sanitation and disinfection products' manufacturer West Penetone.	Find the complete products list, technical sheets and MSDS at <a href="http://www.westpenetone.com">http://www.westpenetone.com</a>	
ghl	You can buy West Penetone products at GHL inc.	Grpue Horticole Ledoux Inc. 785, Paul-Lussier, Ste-Helene-de-bagog, Quebec, Canada, J0H 1M0 - Toll free: 1.888.791.2223 ghl@ghlinc.com <a href="http://www.ghlinc.com">http://www.ghlinc.com</a>	

TABLE LEGEND													
Application methods													
A	B	C	D	E	G	H	I	J	*Note 1		BF	BFVA	
Pressure washer / sprayer	High pressure sprayer ULV	Washing tub, soaking	With broom, brush	In-line injection with proportional injector	Backpack sprayer	Footbath automatic	Footbath mat	Fogging / sprinkling	Pour directly / diluted	HYPER SAN / FOAM-IT application for general cleaning must be done in a packinghouse facility / food processing plant, and not in the greenhouse.		Bactericide Fungicide	Bactericide Fungicide Virucide Algicide
RIDSTONE	X	X	X	X	X	X	X	X	X	X	X	X	
ADHERE NC	X		X	X	X	X	X	X	X	X	X	X	
PENBLITZ 228M	X	✓		X	X	X	X	X	X	X	X	X	
BIO-EZE 3	X	X	✓	X	X	X	X	X	X	X	X	X	
FOAMCHEK	✓	X	X	X	X	✓	✓	✓	✓	✓	✓	✓	
SPECIAL 10	X	✓	X	X	X	X	X	X	X	X	X	X	
TERAMINE NR	X	X	X	X	✓	X	✓	✓	✓	✓	✓	✓	
FOAM-IT	X	X	X	X	X	✓	✓	✓	✓	✓	✓	✓	
BIO-SAN	X	X	X	X	✓	X	✓	✓	✓	✓	✓	✓	
DUTRION	X	✓	X	X	X	✓	✓	✓	✓	✓	✓	✓	
HYPER SAN	X	X	X	X	X	X	X	X	X	X	X	X	