

norweco[®]

ENVIRO-C[™]

DECHLORINATION TABLETS

GENERAL SPECIFICATIONS

Enviro-C dechlorination tablets shall be formulated and produced to chemically neutralize both free and combined chlorine in water, wastewater and process water treatment systems. Enviro-C dechlorination tablets shall be engineered to assist in meeting stringent discharge limitations in a fast and effective manner. The tablets shall be 2⁵/₈" diameter, compressed to 1" thickness with an approximate weight of 4 oz. and incorporate beveled edges to stabilize chemical release and minimize maintenance requirements. Enviro-C dechlorination tablets utilize the unique chemistry of Vitamin C to provide a stable and consistent process to neutralize chlorine that is also environmentally safe.

TABLET PROPERTIES AND USAGE

When used as directed, Enviro-C dechlorination tablets shall provide an environmentally safe dose of ascorbic acid capable of neutralizing free and combined chlorine present in treated water, wastewater or process water. Enviro-C dechlorination tablets shall provide consistent reduction or elimination of residual chlorine without affecting water quality, dissolved oxygen or other discharge parameters. Research shows when utilizing a chemically balanced Vitamin C tablet such as Enviro-C dechlorination tablets, they effectively neutralize chlorine and are safer to handle than sulfur-based products. A unique combination of sustained release agents and ascorbic acid shall maintain a consistently uniform application rate regardless of flow, temperature or humidity. Enviro-C dechlorination tablets shall generally lower chemical consumption and provide reliable reduction of chlorine residual in a thorough, safe and economical manner. Therefore, the use of other tablets of similar composition shall not be considered for this application.

PRODUCT APPLICATION

The 2⁵/₈" diameter by 1" thick Enviro-C dechlorination tablets shall be effective in the reduction or elimination of residual chlorine while protecting the surrounding environment. Enviro-C dechlorination tablets shall assist in meeting stringent discharge limitations by neutralizing chlorine and chloramines from the flow. Enviro-C dechlorination tablets are considered non-toxic to fish and other aquatic life. Enviro-C tablets shall be considered non-hazardous under U.S. Department of Transportation (DOT), U.S. Environmental Protection Agency (USEPA), RCRA, CERCLA and SARA Title III listings and consist solely of commercial grade or technical grade ingredients. Following is a list of some common applications where Enviro-C dechlorination tablets may be utilized: municipal water plants, hydrant flushing, municipal wastewater plants, water towers, wastewater treatment lagoons, package wastewater treatment systems, septic tanks, sand filters, extended aeration plants, spray irrigation systems, potable water filtration backwash and home wastewater treatment plants.

DESIGN DATA

Tablet Size	2 ⁵ / ₈ " diameter, 1" thick	Inert Ingredient Content	25%
Approximate Tablet Weight	4 oz. (115 grams)	USDOT Hazard Class	Non-hazardous
Active Ingredient	Ascorbic Acid	Appearance Characteristics	White Tablet with Citrus Odor
Active Ingredient Content	75%	Special Design Features	Beveled Edges

SPECIAL INSTRUCTIONS

Read the entire product container label, the Material Safety Data Sheet and the Enviro-C Safety and Tablet Properties and Usage instructions before handling or use. Always wear rubber gloves and either safety goggles or a face shield when handling Enviro-C dechlorination tablets or working with a tablet feeder or chemical feed tube. Refer to tablet feeder manufacturer's instructions to determine the correct number of tubes to fill with Enviro-C dechlorination tablets. Store Enviro-C dechlorination tablets only in their tightly sealed original container. Do not store in direct sunlight or areas where temperature may exceed 140° F. Enviro-C dechlorination tablets are a strong reducing agent containing ascorbic acid. Contact with oil, petroleum products or oxidizing agents, such as Bio-Sanitizer disinfecting tablets or any tablet used for chlorination, is extremely dangerous. Do not mix with swimming pool chemicals. Enviro-C dechlorination tablets should be stored in a cool, dry, well-ventilated area for maximum shelf life. To prevent moisture contamination, exercise care when removing tablets from the container or filling feed tubes. Avoid contact with skin, eyes, mouth, respiratory system or clothing.

PRODUCT STORAGE

Enviro-C dechlorination tablets are a strong reducing agent. Tablets should be stored in a cool, dry, well-ventilated area, away from heat or flame. Avoid storage in areas subject to direct sunlight or temperature in excess of 140° F. Stock should be rotated on a first-in, first-out basis. Enviro-C dechlorination tablets must be stored in their original container with lid tightly closed. Do not allow moisture to enter the pail during storage or while removing tablets for use. Moisture contamination may affect tablet integrity and performance. Do not reuse the empty container.

SAFETY INSTRUCTIONS

Before handling Enviro-C tablets, carefully read the container label and the Product Storage, Tablet Handling, Caution and First Aid sections of these instructions. Do not add Enviro-C tablets to a feed tube containing any other product, particularly strong acids, strong bases or strong oxidizers. Such action may cause a violent reaction leading to fire or explosion. Do not contaminate food or feed during the use, storage or disposal of Enviro-C tablets or the cleaning of chemical feed equipment. Always wear rubber gloves and either safety goggles or a face shield when handling Enviro-C dechlorination tablets or working with any tablet feeder or feed tube. Avoid contact with skin, eyes, mouth, respiratory system or clothing. Keep this product only in its tightly closed original container. Store only in a cool, dry, well-ventilated area.

TABLET HANDLING

Use only clean, dry utensils. Do not add Enviro-C tablets to any device containing remnants of any other product – contact with oxidizers, such as Bio-Sanitizer disinfecting tablets or any other tablets used for chlorination can cause fire and the release of toxic gas. Read the entire Enviro-C tablet container label and these instructions carefully before handling this product. Use only in well-ventilated areas. Enviro-C tablets are not rated a hazardous substance by the USDOT or USEPA, but necessary care should be taken in the use and handling of the tablets. Collected material can be dissolved in water, exercising caution when handling tablets. Dispose of dissolved material in any appropriate industrial waste collection system. Consult local, state and federal regulatory agencies before disposing of any material.

FEED TUBE LOADING INSTRUCTIONS

1. Remove feed tube from dispenser housing.
2. Remove protective cap from feed tube; place cap in a clean, dry area.
3. Remove any tablet residue by gently tapping feed tube on concrete or stone surface. If tablets other than Enviro-C have been used, rinse tube and cap with fresh water until clean and allow to dry before proceeding.
4. Hold tube, slotted end up, at a 45° angle and slide Enviro-C dechlorination tablets into the tube, one tablet at a time.
5. Ensure that all tablets lie flat, on top of one another, in the feed tube.
6. Use your gloved hand to retain tablets inside the open end of the inverted tube while filling.
7. Carefully return tube to upright position.
8. Replace the cap securely.
9. Place tube back into housing, slotted end down.
10. Be sure feed tube is fully engaged and rests evenly on the floor of the housing.
11. If the tablet feeder incorporates multiple feed tubes, consult the manufacturer's instructions to determine the correct number of tubes to be filled and their placement.



CAUTION

Do not mix Enviro-C dechlorination tablets with acids or oxidizing agents such as Bio-Sanitizer disinfecting tablets or other tablets used for chlorination – fire or explosion could result. Keep out of the reach of children. Avoid contact with skin, eyes, mouth, respiratory system or clothing – failure to do so may cause irritation on contact. Wear rubber gloves and either safety goggles or a face shield when handling this product. Inert ingredients could support combustion. Use self-contained breathing apparatus for fire fighting.

FIRST AID INSTRUCTIONS

If contact with skin occurs, wash with water for 15 minutes. If irritation persists, seek medical attention.
If eye contact occurs, flush with water for at least 15 minutes. Get immediate medical treatment.
If swallowed, promptly drink large quantities of water or milk. Induce vomiting. Avoid alcohol. Call physician immediately.
If inhaled, move victim to fresh air. If difficulty in breathing persists, get immediate medical attention.
In case of fire, immediately evacuate the area and notify the fire department.

GENERAL CHEMICAL & PHYSICAL PROPERTIES

ENVIRO-C™ DECHLORINATION TABLETS

EMERGENCY TELEPHONE: (800) 424-9300

DATE PREPARED: JANUARY 2014

NOTE: THIS PRODUCT IS NOT RATED A HAZARDOUS MATERIAL BY THE U.S. DEPARTMENT OF TRANSPORTATION OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY. THE FOLLOWING DATA IS FOR INFORMATIONAL PURPOSES ONLY.

I. PRODUCT IDENTIFICATION

TRADE NAME	Enviro-C™
CHEMICAL	Ascorbic Acid
CHEMICAL ABSTRACT SYSTEM NO.	CAS #50-81-7
CHEMICAL DESCRIPTION	Reducer
FORMULA	C6H8O6
USDOT SHIPPING NAME	Non-hazardous tablets
USDOT HAZARD CLASS	Non-hazardous

II. INGREDIENTS

HAZARDOUS INGREDIENTS	None
NON-HAZARDOUS INGREDIENTS	Ascorbic Acid 75%
	Inert Ingredients 25%

III. PHYSICAL DATA

BOILING POINT AT 760 mm Hg	Not Applicable
FREEZING/MELTING POINT	Not Applicable
SOLUBILITY IN H ₂ O; % BY WEIGHT	33g/100mL water at 25° C
SPECIFIC GRAVITY OF TABLET	Not Applicable
APPROXIMATE TABLET DENSITY	95 lbs./ft ³
pH OF SOLUTION	Acidic
VOLUME % VOLATILE	Not Applicable
APPEARANCE AND ODOR	White Tablet with Citrus Odor

IV. FIRE AND EXPLOSION DATA

FLASH POINT	Not Applicable
FLAMMABLE LIMITS IN AIR	Not Applicable
EXTINGUISHING MEDIA	Use extinguishing media appropriate for burning material. Compatible with water fog, spray foam or CO ₂ .
SPECIAL FIRE FIGHTING PROCEDURES	NIOSH/MSHA-Approved, positive pressure, self-contained breathing apparatus with full face piece.
UNUSUAL FIRE & EXPLOSION HAZARD	Ingredients could support combustion by burning. Use self-contained breathing apparatus for fire fighting.

V. HEALTH HAZARD DATA

ACUTE TOXICITY DATA (ANIMAL)

LC 50 INHALATION	See effects of overexposure.
LD 50 ORAL	See effects of overexposure.
LD 50 DERMAL	See effects of overexposure.
LC 50 AQUATIC	Non-toxic for fish or aquatic life.

CHRONIC TOXICITY

Non Identified

VI. EFFECTS OF OVEREXPOSURE

PERMISSIBLE	No permissible exposure limits have been established by OSHA.
ACUTE	
INHALATION	Inhalation of product dust or solution may cause respiratory tract irritation.
EYE	Dust or solution may burn eyes on contact.
SKIN	Product dust or solution may result in skin irritation upon prolonged contact.
INGESTION	No harmful effects expected.

VII. EMERGENCY AND FIRST AID PROCEDURES

INHALATION	Remove to fresh air. If not breathing, resuscitate and administer oxygen if readily available. Seek medical attention immediately.
EYE CONTACT	Immediately flush with large amounts of water for fifteen (15) minutes, rinsing eye thoroughly. Get medical attention.
SKIN CONTACT	Wash with plenty of soap and water for fifteen (15) minutes. Remove contaminated clothing. If skin irritation occurs, get medical attention. Wash clothing before reuse. Do not use any solvents.
INGESTION	If conscious, drink large quantities of water or milk and induce vomiting. Call a physician immediately. Avoid alcohol. If unconscious, or in convulsions, seek medical attention immediately. Do not give anything by mouth to an unconscious person.

VIII. STEPS FOR MATERIAL SPILL

Spills exceeding 100 pounds should be reported to the local authorities.

1. Contain all spilled material, wearing appropriate protective equipment.
2. Place spilled material in clean, dry containers for disposal. Do not flush to surface water.

WASTE DISPOSAL METHOD

Not rated a hazardous substance by USEPA. Collected material can be dissolved in water, exercising caution. Dissolved material may be discharged into an appropriate industrial waste collection system but consult local, state and federal regulating agencies before disposing of any material.

IX. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION	If dusty conditions are encountered, use NIOSH/MSHA respirator with acid gas cartridge and dust pre-filter.
VENTILATION	Store and use in a well-ventilated area.
EYE PROTECTION	Chemical safety goggles.
GLOVES	Natural or synthetic rubber.
OTHER PROTECTIVE EQUIPMENT	Boots, aprons or chemical suits as required to prevent skin contact.

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ADDITIONAL CHEMICAL PRODUCTS FROM NORWECO

BIO-DYNAMIC® TABLET FEEDERS

Bio-Dynamic tablet feeders are a technological advancement in self-contained tablet dosing systems for water or wastewater treatment. A low cost, low maintenance and effective method of chemical treatment, Bio-Dynamic feeders have no mechanical components and require no electricity. The safety, accuracy and reliability of Bio-Dynamic feeders outperform gas, liquid and ultraviolet systems. With fifteen different models, Bio-Dynamic feeders accommodate a wide range of flows and plant conditions. Installation flexibility including direct burial, inline and contact chamber mounting provides many options for locating the feeder. Complete 24" riser assemblies are available for Series 2000 and 4000 tablet feeders, while the LF Series uses 4" PVC pipe and Norweco's remote removal system to allow service from grade. No model of Bio-Dynamic feeder will ever require confined space entry equipment under OSHA regulations. Molded inlet and outlet hubs allow the Bio-Dynamic feeder to be directly connected to treatment system piping without the need for a separate drop box. The tiered flow deck of the Bio-Dynamic feeder accommodates variable, intermittent and surge hydraulic flows into the system. The flow deck directs liquid to the feed tubes during low flows and disperses liquid velocity throughout the feeder during peak flows, resulting in consistent chemical application. In many models, chemical dosage is further controlled by interchangeable weir plates or an optional sluice that can be completely adjusted from a 1" to 3" outlet width. The sluice can be adjusted during tablet feeder operation using only a standard socket wrench with extension.



All models are backed by a ten year limited warranty. Standard components include one-piece feed tubes with twist lock caps, molded inlet and outlet hubs, molded mounting feet and Norweco's tiered flow deck.

BIO-SANITIZER® DISINFECTING TABLETS

Bio-Sanitizer disinfecting tablets are uniquely formulated to provide efficient and reliable disinfection of water or wastewater treatment system flows. Bio-Sanitizer tablets provide treatment plant operators a consistent means to meet disinfection standards without exceeding new and stringent limits for total residual chlorine. Produced from a proprietary grade of calcium hypochlorite and containing a minimum of 70% available chlorine, Bio-Sanitizer tablets are registered by the U.S. Environmental Protection Agency and the Ministry of the Environment. With a unique beveled edge, Bio-Sanitizer tablets dissolve slowly and evenly, providing effective, economical bacteria killing power. Bio-Sanitizer disinfecting tablets are packaged in easy to open, resealable 10 lb., 25 lb., 45 lb. and 100 lb. Department of Transportation approved containers.

BIO-GEM® ORGANIC DIGESTER

A blend of bacteria, enzymes and natural growth accelerators, Bio-Gem organic digester effectively digests grease, fats and oils in wastewater treatment systems, lift stations, septic tanks, sand filters, drain lines and commercial grease traps. When used as directed, Bio-Gem liquid will quickly and effectively convert common grease, fats and oils into carbon dioxide and water. This organic digestion process is much more effective and reliable than compounds that merely emulsify the grease, fats and oils, sending the problem to downstream treatment processes. Regular use of Bio-Gem liquid will reduce odors, stabilize effluent quality, reduce system maintenance and minimize tank pump-out frequency. Packaged in one or five gallon containers and 55 gallon drums, Bio-Gem organic digester is environmentally safe and works in aerobic or anaerobic conditions.

norweco®

*Engineering the future of water
and wastewater treatment*

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