

All granular activated carbon media for all EWS and CWL Whole Home Filtration Systems

Versatility of Process

Filters allow the bonding of single or multiple types of extremely small sized particles onto a single support structure. For example, fine powdered lead sorbents bonded onto larger carbon support structures. This unique feature enables EWS to produce complex composite filtration media that can meet the requirements of complicated water contamination problems.

Increased Surface Area

The ability to bond extremely fine powdered media onto larger support particles results in increased surface area and improved kinetic efficiency. Instead of having one large particle available for filtration purposes, EWS technology makes possible the bonding of thousands of fine particles onto the surface of the larger support particles which greatly increases the surface area of the composite media.

Enhanced Kinetics

The process of increasing the surface area of a media enhances the adsorption kinetics and catalytic effects of that media. Consequently, in all EWS sink filtration product, EWS technology allows us to use less media and still achieve similar or superior filtration results. As a result, with this technology, we are now able to design smaller, more aesthetically appealing filtration devices with excellent performance characteristics. In all EWS whole home water filtration systems, this EWS technology allows us to create greater filtration capacities and with more longevity.

Improved Performance

EWS carbon media for cartridges, blocks or loose media has improved catalytic and adsorption characteristics because of the increase in surface area and kinetic activity. Test results have proven that EWS composite adsorption products exceed the performance characteristics of simple, one component, granular based products.

Standard 42 Aesthetic Effects

Parameter	US EPA MCL	Influent Challenge	Effluent Average	Effluent Maximum	Percent Reduction Average	Percent Reduction Minimum
Chlorine	-	2.0 mg/L	0.03 mg/L	0.06 mg/L	98.5	97

Note regarding NSF compliant testing: The challenge level of chlorine is much higher than found in treated tap water



Top Claims - The Myth and The Reality

Claim: Multi-media tanks or tanks with multiple types of filtration media filter for chlorine, chloramine*, bacterial removal, pH balancing, water polishing and other claims.

Reality:

First, effective bacterial removal is only achieved through ultraviolet, ozone or chemical disinfectant. Bacteriostatic filters using silver nitrate or other metal resins only protect poor filtration media from internal bacteria growth and not the consumer against bacteria in the water.

Second, when more than one media is incorporated into one tank, there is not enough of any one media to effectively remove the contaminants as claimed. Each media has a specific amount of material needed per tank size and flow rate according to their Material Safety Data Sheets (MSDS) in order to actually be effective. For example, while marketing all the buzzwords to the consumer where 3 or up to 5 different media is used, the tank would have to be up to 20 feet tall to accommodate all the media properly installed. Result, the system does nothing but fool the consumer for taste over a brief period. **EWS uses the highest grade of specialty blended proprietary carbon media available.**

Claim: We are green and water conservative because our systems do not need to backwash.

Reality:

Remember the Material Safety Data Sheets mentioned above for each filtration media? Oddly enough they all have requirements for backwashing filtration media to effectively filter, maintain proper filtration surface area and to prevent any packing, channeling and bacteria growth. Not backwashing media results in poor results and costly and premature replacement. Any claims are bold faced lies dressed up nicely as marketing - the only loser is the consumer. **EWS effectively backwashes to maintain effective filtration and longevity. Backwash water usage is adjustable using our advanced valving and the water (which is not a brine) is usable for landscaping, pools and other needs.**

Claim: Sure our units also remove chloramine*.

Reality:

Making this claim is dangerous. Chloramine requires a different and very specific carbon media and the proper amount for proper contact time. Most filters may remove the chloramine for a short time (taste only) until they become incapable of removing the entire compound. multi-media filters, refrigerator filters, pitcher, carafe and faucet filters simply reduce the chlorine and allow the ammonia portion of the chloramine compound to shear off and render the filter useless as a foul or bad taste becomes evident and are limited by their filtration capacities. Therefore, similar to bottled water, taste becomes the actual consumer standard and not the health of the water or actual contaminants removed. **EWS has developed an advanced media and systems to effectively remove chloramine (which also work great on chlorine and VOCs)**

*Chloramine is a compound comprised of chlorine and ammonia. For the removal of this compound to be effective, carbon must be able to have catalytic and kinetic capabilities of drawing the chlorine and attached ammonia onto the surface area of the carbon and drawing it into the interior surface area of the carbon granule. Greater surface area and contact time is necessary for adequate removal over the life of the filter cartridge.

Claim: Small tanks or cartridges in larger housings are whole home filtration.

Reality:

At bare minimum, a typical home requires 10 gallons per minute (gpm) of available water to supply enough flow to the home. Small tanks that appear to be less money have flow rates of less than 10 gpm will need more than one unit to be effective for a homes' use. The other issue as stated above, there is not enough filtration media or contact time to effectively do anything but fool the consumer that taste equates to health. **EWS wants you to be informed not sold. EWS wants to provide you a healthy water environment and not one that may simply taste good.**

ALL FILTRATION PRODUCT PROUDLY MADE & ASSEMBLED IN THE USA



All EWS advanced carbon filtration media meets or complies with NSF Standard 42 for reduction of Chlorine and other Volatile Organic Compounds. The media utilizes a high performance advanced kinetic and catalytic granular activated carbon which provides exceptional filtration capacity and effectively reduces by an average of 98.5% chlorine, voc's, bad taste and odor in drinking water.

About Municipally-Treated Water

Municipal water is heavily regulated, monitored, tested, filtered and treated. Most taste, quality and health issues are directly related to the treatment or disinfection of the water and their by-products, as well as man-made pollutants common to most water (see reference #'s below generally between 3 to 5). Issues with heavy metals and primary contaminants (see reference #'s below generally between 0 to 2) are highly regulated and effectively treated by water utilities. These contaminants are rarely an issue with water quality.

How to Use the (GAC) Carbon Filtration Reference Chart

Below is a simple reference chart to give some perspective as to GAC's capabilities with various substances. Some items are heavy metals and inorganics, while others are VOC's (volatile organic compounds), some of which are man-made pollutants. Still other items, such as hardness, are not even considered contaminants. In general, GAC is very economical and a great complement to municipally-treated water without the disadvantages of more aggressive filtration. GAC is used in all filtration due to its removal capacities. Know your water to select the correct product for you, your family and your home.

Acetaldehyde	4	Emulsions	2	Lead	3	Precipitated Sulfur	2
Acetic Acid	3	Ethyl Acetate	5	Lime	0	Propioic Acid	4
Acetone	4	Ethyl Acrylate	5	Mercaptans	4	Propionaldehyde	3
Alcohols	4	Ethyl Alcohol	4	Metal Salts	1	Propyl Acetate	4
Alkalinity	1	Ethyl Amine	4	Methyl Acetate	4	Propyl Alcohol	4
Amines	3	Ethyl Chloride	4	Methyl Alcohol	4	Propyl Chloride	4
Ammonia	3	Ethyl Ether	4	Methyl Bromide	5	Radon	4
Amyl Acetate	5	Fertilizers	1	Methyl Chloride	4	Rubber Hose Taste	5
Amyl Alcohol	5	Fluorides	2	Methyl Ethyl Ketone	5	Seawater	1
Antifreeze	4	Formaldehyde	2	Naphtha	5	Sediment	2
Arsenic	1	Gasoline	5	Nitrates	0	Soap	3
Benzene	5	Glycols	5	Nitric Acid	3	Sodium Hypochlorite	5
Bleach	5	Hardness	0	Nitrobenzene	5	Soluble Iron	2
Boron	1	Heavy Metals	3	Nitrotoluene	5	Solvents	4
Butly Alcohol	5	Herbicides	5	Odors (General)	5	Sulfuric Acid	1
Butly Acetate	5	Hydrogen Bromide	2	Oil - Dissolved	5	Sulphonated Oils	4
Calcium Hypochlorite	5	Hydrogen Chloride	1	Oil - Suspended	2	Suspended Matter	2
Carbon Dioxide	0	Hydrogen Fluoride	1	Organic Acids	4	Tannins	4
Chloral	5	Hydrogen Iodide	2	Organic Esters	5	Tar Emulsion	4
Chloramine	4	Hydrogen Peroxide	5	Organic Salts	4	Tartaric Acid	4
Chloroform	5	Hydrogen Selenide	3	Oxalic Acid	5	Taste (DI Water)	4
Chlorine	5	Hydrogen Sulfide	3	Oxygen	5	Taste (From Organics)	4
Clorobenzene	5	Hydrochlorous Acid	5	Ozone	4	THM's	5
Chlorophenol	5	Inorganic Acids	1	PCB's	5	Toluene	5
Chlorophyll	4	Inorganic Chemicals	1	Pesticides	5	Toluidine	5
Citric Acid	4	Insecticides	5	Phenol	5	Trichlorethylene	5
Cresol	5	Iodine	5	Phosphates	0	Turpentine	5
Defoliant	5	Isopropyl Acetate	5	Plastic Taste	5	Urine	2
Detergents	3	Isopropyl Alcohol	5	Plating Wastes	3	Vinegar	3
Diesel Fuel	5	Ketones	5	Potassium Permanganate	4	Xanthophyll	4
Dyes	5	Lactic Acid	4	Precipitated Iron	2	Xylene	5

KEY TO THE ABOVE LIST FOR CARBON FILTRATION:

5 - EXCELLENT: Proven Application **4 - VERY GOOD:** Proven Application **3 - GOOD:** Very Acceptable Result
2 - FAIR: limited application **1 - POOR:** not a recommended application (See RO) **0 - Not applicable** (See RO)

- Carbon Block technology has additional filtration capabilities and is the last stage in all EWS Essential Drinking Water Systems. See additional information on EWS Essential Drinking Water Systems (model #'s DWS or RO3).
- UV Disinfection for greater safeguards (DWS-UV, optional with Reverse Osmosis). See additional information.
- To prevent the absorption and inhalation of chlorine, chloramine, VOCs, by-products and pollutants. See CWL or EWS Whole Home Systems for GAC filtration to the entire home for bathing, showering and all uses.

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Summary of Performance Guidelines, Factory Preparation, Product Performance, and Compliances

Product performance may vary based on local water conditions, proper product specification and application, proper plumbing application, setup, installation, startup, maintenance and/or usage. To ensure proper operation, follow all setup, installation, start-up and maintenance procedures as detailed in all service guides. In addition, follow all applicable local plumbing codes.

The feed water must comply with the following conditions for all systems capabilities, compliances, and warranties to remain valid. All commercial POU and POE systems: Performance guidelines and feed water compliance dependent on specification and application, please consult with EWS, Inc. upon specification.

Water Temperature Range:	minimum 40°F, maximum 80°F		
Water Pressure:	Point of Use (POU):	minimum 40 psi, maximum 75 psi;	
	Point of Entry (POE):	minimum 40 psi, maximum 75 psi	
Water Flow Rates:			
Point of Use (POU):	water supplied to residential sink product:	at a minimum of 1 gpm	
Point of Entry (POE):	water supplied to tanks up to 1054:	at a minimum of 8 gpm	
	water supplied to 1354 tanks:	at a minimum of 12 gpm	

All product must be connected to main or cold water supplies. Product not intended to be connected to hot water supplies or allow heated water to flow through systems. Contact EWS, Inc. for product available for this purpose.

All product contain water. Do not allow any product to freeze.

Do not use where water is microbiologically unsafe or with water of unknown quality without adequate disinfection before or after the unit(s).

Reverse Osmosis Systems Only: Never allow reject water to be hindered or stopped, without the reject water flow or improper drain connection, impurities may build up on membrane.

Point of Entry (POE) Units: Do not prevent backwash or brine lines to be stopped or restricted. Create and allow air gap to prevent any cross contamination.

Compliances:

Please be advised that all the materials and components utilized in producing all POU (Point of Use) drinking water filtration and reverse osmosis systems, and all POE (Point of Entry) filtration, conditioning and softening equipment, by EWS, Inc., comply with, but are not limited to, any one or more of the appropriate regulating standards. Furthermore, and without exception, every component included in all POU and POE systems by EWS, Inc. are compliant for food and beverage contact and/or meet or comply with the most current, appropriate, and applicable standards without exception.

Factory Preparation:

All systems are factory prepared and thoroughly checked to assure proper function and if applicable, quality tests of product water produced to assure that minimum standards of rejection have been met, and/or tests of specific components to assure correct function and flow rate measurements to assure efficiency specifications are met.

Product Performance:

- ◆ For all product capabilities, compliances and/or warranties to remain valid, all systems are dependent upon proper application, specification, and installation of any specific unit and/or combination of units.
- ◆ Please know your local or individual water condition(s), and plumbing application(s). Please review system(s) capabilities, applications, setup, installation, startup, maintenance, and related warranties.
- ◆ Detailed information is published in EWS Product Manuals and specific Product Service Guides (included with each specific unit) and made available upon request throughout US distribution and/or EWS corporate offices. All current information is available online @ www.ewswater.com



FDA*, EPA and NSF** Compliances

Please be advised that all the materials and components utilized in producing all POU (Point of Use) drinking water filtration and reverse osmosis systems, and all POE (Point of Entry) filtration, conditioning and softening equipment, by EWS, Inc., comply with, but are not limited to, one or more of the following regulating standards:

NSF STANDARD 14	FDA 21 CFR 177.1520	FDA 21CFR 177.1640	FDA 21 CFR 177.1350
FDA 21 CFR 175.105	CAS # 7440-44-0	ANSI 304	CDA C360000
NSF STANDARD 60	NSF STANDARD 61	NSF STANDARD 58	ANSI 302
ANSI 316	FDA 21 CFR 177.2600	FDA 21 CFR 175.300	FDA 21 CFR 177.2550
NSF STANDARD 52	NSF STANDARD 42	NSF STANDARD 18	FDA 21 CFR 177.2550
FDA 21 CFR 177.1655	FDA 21 CFR 177.1630	FDA 21 CFR 177.2800	FDA 21 CFR 175.300
FDA 21 CFR 177.2260	FDA 21 CFR 181.32	FDA 21 CFR 177.2660	FDA 21 CFR 177.1950
FDA 21 CFR 177.2910	FDA 21 CFR 177.2250	FDA 21 CFR 177.1680	NSF STANDARD 53
NSF STANDARD 55	CAAB1953		

- *The standards listed above relate to the Code of Federal Regulations of the United States of America, Title 21, Charter 1, Subchapter B set forth by the U.S. Food and Drug Administration.
- **The NSF (National Sanitation Foundation) standards correlate to materials and potable water. The National Sanitation Foundation is not a government agency.

Furthermore, and without, exception every component included in all POU and POE systems by EWS, Inc. are compliant for food and beverage contact and/or meet or comply with the most current, appropriate, and applicable standards without exception.

All EWS product has been independently tested to NSF standards by an accredited third-party laboratory for all claims made regarding NSF/ANSI standards.

Please take note of this helpful and enlightening information on this confusing subject:

Contrary to common belief and less than truthful marketing, drinking water treatments units are NOT required to be "NSF Certified" (as tested by NSF itself), but they must be independently tested to applicable NSF standards by an accredited, independent laboratory. Though the test standards bear the NSF/ANSI name, NSF is just one of many accredited institutions.

- All EWS Product is No-Lead Compliant to California AB1953 and the No-Lead Standards which will take effect throughout the USA as of 2014.

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The EWS, Inc./Environmental Water System Product available through:



Authorized Kitchen & Bath Showrooms, Appliance Showrooms, Building & Plumbing Wholesale Supply Locations and their building, plumbing, HVAC and service contractors, and Authorized Online Distributors. All Distribution adheres to an EWS, Inc. MAP Policy for published pricing. EWS, Inc. does not sell directly to the retail consumer or directly to building, plumbing, HVAC and service contractors.

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Have a Question...?

Seriously....give us a call. We're here to help.

Summary Product Tearsheets and Complete Product Information Booklets are available online @ ewswater.com or by e-mail attachment by simply contacting EWS Customer Service.

Complete Service Guides provide the correct way to setup, install and startup all product and include all technical specifications are also available online @ ewswater.com or by e-mail attachment by simply contacting EWS Customer Service.



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