## EWS, Inc. / Environmental Water Systems

# GRANULAR ACTIVATED CARBON (GAC) Reference List

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 compliment 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.

- Carbon (GAC) Filtration: For the general removal of chlorine, chloramines, gases, dyes, fuels, the man-made pollutant issues, the volatile organics contaminents; see those categories that have reference numbers of 3, 4 or 5. Filtration of these items compliment most municipal water for taste, odor, clarity and quality for oral intake, absorption and inhalation. See CWL or EWS whole home appliances for this filtration to the entire home or any sink filtration system for any point of use.
- In general, items listed with 0, 1, or 2 are closely monitored and treated by the local municipality or utility that delivers your water. Issues such as lead occur due to aging delivery systems and other elements such as nitrates or arsenic may be present due to local environmental conditions. These elements are related to oral intake only. Specific filtration of lead and cysts are accomplished by Carbon Block found in the FUGAC250 or UU250 with the added safeguard of UV disinfection. Specific filtration for oral intake of other items referenced by 0, 1, or 2 can be accomplished by the use of a membrane, as found in the RU300C18 reverse osmosis system
- Micro-biological issues must be addressed (chlorine, ozone) at the point of entry for any well or untreated water. For safeguarding of municipal water for cysts (FUGAC250 or RO) and for e-coli, bacteria, viral (UU250 or RO with UV options only). Removal of iron and/or manganese must be accomplished by prior to any filtration by our EWS-1054/1354-P units. Any use of softeners create other issues that may require RO to remove salts - try to confine to hot side.

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| 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 | 1 | 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 |
| Bytly 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 | Hydroclorous 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 |
| Defoliants | 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:**

5- EXCELLENT - A proven application
4- VERY GOOD - A proven application
3- GOOD - very acceptable result
2- FAIR - limited application
1- POOR - not a recommended application
0- Not an application for GAC

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