

# NSF Performance Data - CBVOC

CB Tech's CBVOC is tested according to NSF/ANSI Standard 42 (Aesthetic Effects), Standard 53 (Health Effects), and Standard 401 (Incidental Contaminants / Emerging Compounds). CB Tech drinking water systems are designed to be used where the water is microbiologically safe and has been adequately disinfected. Systems certified for cyst reduction may be used on disinfected water that may contain filterable cysts.

## NSF/ANSI 42 - Aesthetic Effects

CB Tech's CBVOC has been certified according to NSF/ANSI Standard 42 for the reduction of the following substances. The concentration of the indicated substances in water entering the system was reduced to a concentration less than or equal to the permissible limit for water leaving the system.

| Substance   | Percent Reduction** | Influent challenge concentration (mg/L unless specified) | Maximum permissible product water concentration (mg/L unless specified) |
|---|---------------------|--|---|
| CHLORAMINE as Aesthetic Effect (As Monochloramine)                            | >97%                | 3.0 mg/L +/- 10%   | 0.5 mg/L  |
| CHLORINE as Aesthetic Effect  | 99%                 | 2.0 mg/L +/- 10%   | > or = 50%  |
| PARTICULATE, (Nominal Particulate Reduction, Class I, Particles 0.5 TO <1 µm) | Class I > 99%       | At Least 10,000 particles/mL                             | > or = 85%  |

## NSF/ANSI 53 - Health Effects

CB Tech's CBVOC has been certified according to NSF/ANSI Standard 53 for the reduction of the following substances. The concentration of the indicated substances in water entering the system was reduced to a concentration less than or equal to the permissible limit for water leaving the system.

| Substance  | Percent Reduction** | Influent challenge concentration (mg/L unless specified)                                  | Maximum permissible product water concentration (mg/L unless specified) |
|--|---------------------|---|---|
| ALACHLOR*  | >98%                | 0.050   | 0.001   |
| ASBESTOS   | >99.9%              | 10 <sup>7</sup> to 10 <sup>8</sup> fibers/L; fibers greater than 10 micrometers in length | 99% reduction requirement   |
| ATRAZINE*  | >97%                | 0.100   | 0.003   |
| BENZENE*   | >99%                | 0.081   | 0.001   |
| BROMODICHLOROMETHANE (TTHM)*                           | >99.8%              | 0.300   | 0.015   |
| BROMOFORM (TTHM)*                                      | >99.8%              | 0.300   | 0.015   |
| CARBOFURAN (Furadan)*                                  | >99%                | 0.19  | 0.001   |
| CARBON TETRACHLORIDE*                                  | 98%                 | 0.078   | 0.0018  |
| CHLORDANE  | >99.5%              | 0.04 +/-10%   | 0.002   |
| CHLOROBENZENE (Monochlorobenzene)*                     | >99%                | 0.077   | 0.001   |
| CHLOROPICRIN*  | 99%                 | 0.015   | 0.0002  |
| CHLOROFORM (TTHM)* (surrogate chemical)                | >99.8%              | 0.300   | 0.015   |
| Cryptosporidium (CYST)                                 | 99.95%              | minimum 50,000/L  | 99.95% reduction requirement  |
| CYST (Giardia; Cryptosporidium; Entamoeba; Toxoplasma) | 99.95%              | minimum 50,000/L  | 99.95% reduction requirement  |
| 2, 4-D*  | 98%                 | 0.110   | 0.0017  |
| DBCP (see Dibromochloropropane)*                       | >99%                | 0.052   | 0.00002   |
| 1,2-DCA (see 1,2-DICHLOROETHANE)*                      | 95%                 | 0.088   | 0.0048  |
| 1,1-DCE (see 1,1-DICHLOROETHYLENE)*                    | >99%                | 0.083   | 0.001   |
| DIBROMOCHLOROMETHANE (TTHM; Chlorodibromomethane)*     | >99.8%              | 0.300   | 0.015   |
| DIBROMOCHLOROPROPANE (DBCP)*                           | >99%                | 0.052   | 0.00002   |

| Substance  | Percent Reduction** | Influent challenge concentration (mg/L unless specified) | Maximum permissible product water concentration (mg/L unless specified) |
|--|---------------------|--|---|
| o-DICHLOROENZENE (1,2 Dichlorobenzene)*          | >99%                | 0.080  | 0.001   |
| p-DICHLOROENZENE (para-Dichlorobenzene)*         | >98%                | 0.040  | 0.001   |
| 1,2-DICHLOROETHANE (1,2-DCA)*                    | 95%                 | 0.088  | 0.0048  |
| 1,1-DICHLOROETHYLENE (1,1-DCE)*                  | >99%                | 0.083  | 0.001   |
| CIS-1,2-DICHLOROETHYLENE*                        | >99%                | 0.170  | 0.0005  |
| TRANS-1,2- DICHLOROETHYLENE*                     | >99%                | 0.086  | 0.001   |
| 1,2-DICHLOROPROPANE (Propylene Dichloride)*      | >99%                | 0.080  | 0.001   |
| CIS-1,3- DICHLOROPROPYLENE*                      | >99%                | 0.079  | 0.001   |
| DINOSEB*   | 99%                 | 0.170  | 0.0002  |
| EDB (see ETHYLENE DIBROMIDE)*                    | >99%                | 0.044  | 0.00002   |
| ENDRIN*  | 99%                 | 0.053  | 0.00059   |
| Entamoeba (see CYSTS)                            | 99.95%              | minimum 50,000/L   | 99.95% reduction requirement  |
| ETHYLBENZENE*                                    | >99%                | 0.088  | 0.001   |
| ETHYLENE DIBROMIDE (EDB)*                        | >99%                | 0.044  | 0.00002   |
| Furadan (see CARBOFURAN)*                        | >99%                | 0.19   | 0.001   |
| Giardia Lamblia (see CYST)                       | >99.95%             | minimum 50,000/L   | 99.95% reduction requirement  |
| HALOACETONITRILES (HAN)*                         |                     |  |   |
| BROMOCHLOROACETONITRILE                          | 98%                 | 0.022  | 0.0005  |
| DIBROMOACETONITRILE                              | 98%                 | 0.024  | 0.0006  |
| DICHLOROACETONITRILE                             | 98%                 | 0.0096   | 0.0002  |
| TRICHLOROACETONITRILE                            | 98%                 | 0.015  | 0.0003  |
| HALOKETONES (HK):*                               |                     |  |   |
| 1,1-DICHLORO-2-PROPANONE                         | 99%                 | 0.0072   | 0.0001  |
| 1,1,1-TRICHLORO-2-PROPANONE                      | 96%                 | 0.0082   | 0.0003  |
| HEPTACHLOR*                                      | >99%                | 0.25   | 0.00001   |
| HEPTACHLOR EPOXIDE*                              | 98%                 | 0.0107   | 0.0002  |
| HEXACHLOROBUTADIENE (Perchlorobutadiene)*        | >98%                | 0.044  | 0.001   |
| HEXACHLOROCYCLOPENTADIENE*                       | >99%                | 0.060  | 0.000002  |
| LEAD (pH 6.5)                                    | >99.3%              | 0.15 +/- 10%   | 0.010   |
| LEAD (pH 8.5)                                    | >99.3%              | 0.15 +/- 10%   | 0.010   |
| LINDANE*   | >99%                | 0.055  | 0.00001   |
| MERCURY (pH 6.5)                                 | >99%                | 0.006 +/- 10%  | 0.002   |
| MERCURY (pH 8.5)                                 | >99%                | 0.006 +/- 10%  | 0.002   |
| METHOXYCHLOR*                                    | >99%                | 0.050  | 0.0001  |
| Methylbenzene (see TOLUENE)*                     | >99%                | 0.078  | 0.001   |
| Monochlorobenzene (see CHLOROENZENE)*            | >99%                | 0.077  | 0.001   |
| MTBE (methyl tert-butyl ether)                   | >96.6%              | 0.015 +/- 20%  | 0.005   |
| POLYCHLORINATED BIPHENYLS (PCBs , Aroclor 1260)  | >99.9%              | 0.01 +/- 10%   | 0.0005  |
| PCE (see TETRACHLOROETHYLENE)*                   | >99%                | 0.081  | 0.001   |
| PENTACHLOROPHENOL*                               | >99%                | 0.096  | 0.001   |
| Perchlorobutadiene (see HEXACHLOROBUTADIENE)*    | >98%                | 0.044  | 0.001   |
| Propylene Dichloride (see 1,2 -DICHLOROPROPANE)* | >99%                | 0.080  | 0.001   |
| RADON  | >94.9%              | 4000 ± 1000 pCi/L  | 300 pCi/L   |
| SIMAZINE*  | >97%                | 0.120  | 0.004   |
| Silvex (see 2,4,5-TP)*                           | 99%                 | 0.270  | 0.0016  |
| STYRENE (Vinylbenzene)*                          | >99%                | 0.150  | 0.0005  |
| 1,1,1-TCA (see 1,1,1 - TRICHLOROETHANE)*         | 95%                 | 0.084  | 0.0046  |
| TCE (see TRICHLOROETHYLENE)*                     | >99%                | 0.180  | 0.0010  |

| Substance   | Percent Reduction** | Influent challenge concentration (mg/L unless specified) | Maximum permissible product water concentration (mg/L unless specified) |
|---|---------------------|--|---|
| 1,1,2,2- TETRACHLOROETHANE*   | >99%                | 0.081  | 0.001   |
| TETRACHLOROETHYLENE*  | >99%                | 0.081  | 0.001   |
| TOLUENE (Methylbenzene)*  | >99%                | 0.078  | 0.001   |
| TOXAPHENE   | >92.9%              | 0.015 +/- 10%  | 0.003   |
| Toxoplasma (see CYSTS)  | 99.95%              | minimum 50,000/L   | 99.95% reduction requirement  |
| 2,4,5-TP (Silvex)*  | 99%                 | 0.270  | 0.0016  |
| TRIBROMOACETIC ACID*  |                     | 0.042  | 0.001   |
| 1,2,4 TRICHLOROENZENE (Unsymtrichlorobenzene)*  | >99%                | 0.160  | 0.0005  |
| 1,1,1-TRICHLOROETHANE (1,1,1-TCA)*  | 95%                 | 0.084  | 0.0046  |
| 1,1,2-TRICHLOROETHANE*  | >99%                | 0.150  | 0.0005  |
| TRICHLOROETHYLENE (TCE)*  | >99%                | 0.180  | 0.0010  |
| TRIHALOMETHANES (THM) (Chloroform; Bromoform; Bromodichloromethane; Dibromochloromethane) | >99.8%              | 0.300  | 0.015   |
| TURBIDITY   | >99%                | 11 +/- 1 NTU   | 0.5 NTU   |
| Unsym-Trichlorobenzene (see 1,2,4-TRICHLOROENZENE)*                                       | >99%                | 0.160  | 0.0005  |
| Vinylbenzene (see STYRENE)*   | >99%                | 0.150  | 0.0005  |
| XYLENES (TOTAL)*  | >99%                | 0.070  | 0.001   |

## Standard 401 - Incidental Contaminants / Emerging Compounds

CB Tech's CBVOC is certified according to NSF/ANSI 401 for reduction of the substances listed below. The concentration of the indicated substances in water entering the system was reduced to a concentration less than or equal to the permissible limit for water leaving the system, as specified in the NSF/ANSI 401\*\*\*.

| Substance        | Percent Reduction** | Influent challenge concentration (mg/L unless specified) | Maximum permissible product water concentration (mg/L unless specified) |
|------------------|---------------------|--|---|
| <b>Group I</b>   |                     |  |   |
| Atenolol         | >95.2%              | 200 ± 20%  | 0.00003 mg/L  |
| Carbamazepine    | >98.3%              | 1400 ± 20%   | 0.0002 mg/L   |
| DEET             | >95.5%              | 1401 ± 20%   | 0.0002 mg/L   |
| Linuron          | >96.2%              | 140 ± 20%  | 0.00002 mg/L  |
| Meprobamate      | >94.9%              | 400 ± 20%  | 0.00006 mg/L  |
| Metolachlor      | >98.5%              | 1400 ± 20%   | 0.0002 mg/L   |
| Trimethoprim     | >96.2%              | 140 ± 20%  | 0.00002 mg/L  |
| <b>Group II</b>  |                     |  |   |
| TCEP             | >97.9%              | 5000 ± 20%   | 0.0007 mg/L   |
| TCP              | 97.8%               | 5000 ± 20%   | 0.0007 mg/L   |
| <b>Group III</b> |                     |  |   |
| Bisphenol A      | 99%                 | 2000 ± 20%   | 0.0003 mg/L   |
| Estrone          | >96.4%              | 140 ± 20%  | 0.00002 mg/L  |
| Ibuprofen        | >95.2%              | 400 ± 20%  | 0.00006 mg/L  |
| Naproxen         | >96.7%              | 140 ± 20%  | 0.00002 mg/L  |
| Nonyl phenol     | >97.5%              | 1400 ± 20%   | 0.0002 mg/L   |
| Phenytoin        | >95.2%              | 200 ± 20%  | 0.00003 mg/L  |

## Footnotes

\*Chloroform was used as a surrogate for claims of reduction of Volatile Organic Chemicals (VOC). CB Tech Systems tested at >99.8% actual reduction of Chloroform. Percent reduction shown herein reflects the allowable claims for VOCs as per tables in the Standard.\*\*Percent reduction reflects actual performance of CB Tech product as specifically tested (at 200% of capacity). Percent reduction shown for VOCs reflects the allowable claims for Volatile Organic Chemicals/Compounds as per Tables. Chloroform was used as a surrogate for VOC reduction claims: the CB Tech Systems' actual reduction rate of Chloroform was >99.8% as tested (at 200% of capacity). \*\*\*NSF Standard 401 has been deemed as "incidental contaminants / emerging compounds". Incidental contaminants are those compounds that have been detected in drinking water suppliers at trace levels. While occurring at only trace levels these compounds can affect the public acceptance/perception of drinking water quality.

1. **Do not use with water that is microbiologically unsafe or with water of unknown quality without adequate disinfection before or after the unit. Systems certified for cyst reduction may be used on disinfected waters that may contain filterable cysts.**
2. CB Tech Drinking Water Systems have been certified, as indicated, by NSF International for compliance to NSF/ANSI Standard Nos. 42, 53 & 401.
3. The CB Tech Drinking Water Systems have been certified by the State of California Department of Public Health for the reduction of specific contaminants listed herein.
4. Chloroform was used as a surrogate for claims of reduction of VOCs. CB Tech Systems tested at >99.8% actual reduction of Chloroform. Percent reduction shown herein reflects the allowable claims for VOCs as per tables in the Standard.
5. Filter life will vary in proportion to the amount of water used and the level of impurities in the water being processed. For optimum performance, it is essential that the filter be replaced on a regularly scheduled basis as follows: (a) annually; (b) when the unit's rated capacity has been reached; (c) the flow rate diminishes; or (d) the filter becomes saturated with bad tastes and odors.
6. CB Tech Drinking Water System Housings are warranted for a lifetime (provided that filter has been changed at least once per year). Please see the Owner's Manual for complete product guarantee and warranty information.
7. Please see the Owner's Manual for installation instructions and operating procedures.
8. In compliance with New York law, it is recommended that before purchasing a water treatment system, NY residents have their water supply tested to determine their actual water treatment needs. Please compare the capabilities of the CB Tech unit with your actual water treatment needs.
9. While testing was performed under standard laboratory conditions, actual performance may vary.
10. The list of substances which the treatment device reduces does not necessarily mean that these substances are present in your tap water.

## CBVOC Specifications

|                                     |  |
|-------------------------------------|--|
| <b>Model Name:</b>                  | CB-VOC (CBVOC)   |
| <b>Approximate Filter Capacity:</b> | 750 Gallons  |
| <b>Replacement Filter Type:</b>     | CBTVOC   |
| <b>Approximate Flow Rate:</b>       | 0.75 gpm @60 psi   |
| <b>Pressure Vessel Composition:</b> | Stainless Steel  |
| <b>Rubber Items:</b>                | Silicone   |
| <b>Outlet:</b>                      | 1/4" NPT   |
| <b>Inlet:</b>                       | 1/4" NPT   |
| <b>Working Pressure Range:</b>      | 30 psi (2.1 kg/cm <sup>2</sup> )<br>to 100 psi (7.0 kg/cm <sup>2</sup> ) |
| <b>Operating Temperature Range:</b> | 32° F (0° C)<br>to 100° F (38° C)<br>- for cold water use only           |
| <b>Particle Retention Size:</b>     | 0.5 micron (sub-micron)  |
| <b>Certified By:</b>                | NSF International  |



**To discuss your requirements  
and to request a quote, please contact:**

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