

Activated Carbon Adsorbency Ratings

The capacity index has the following meaning:

- 4:** High capacity for all materials in this category. One pound takes up about 20% to 50% of its own weight average about 1/3 (33 1/3%). This category includes most of the odor causing substances.
- 3:** Satisfactory capacity for all items in this category these constitute good applications but the capacity is not as high as for category 4. Absorbs about 10% to 25% of its weight - average about 1/6 (16 7/2)
- 2:** Includes substances which are not highly adsorbed but which might be taken up suffi-

ciently to give good service under the particular conditions of operation. These require individual checking.

1: Adsorption capacity is low for these materials Activated charcoal cannot be satisfactorily used to remove them under ordinary circumstances.

Some of the contaminants listed in the table are specific chemical co-pounds, some represent classes of co-pounds, and others are mixtures and of variable composition. Activated charcoal's capacity for odors varies somewhat with the concentration in air, with humidity, and tem-

perature, and with the actual velocity used through the filters. The numbers given represent typical or average conditions and might vary in specific instances. The values in the table have been assembled from many sources including laboratory tests and field experience. This table should be used as a general rule only.

*Straight activated charcoal does not have much capacity for some reactive gases, such as ammonia, formaldehyde, etc. In some cases where the gas is chemically reactive, appropriate impregnated activated charcoal can be recommended.

Acetaldehyde	2	Coal smoke odor	3	*Formaldehyde	2	Methyl ether	3	Propane	2
Acetic Acid	4	Combustion odors	4	*Formic acid	3	Methyl ethyl ketone	4	*Propionaldehyde	3
Acetic Anhydride	4	Cooking odors	4	Fuel gases	2	Methyl formate	3	Propionic acid	4
Acetone	3	Corrosive gases	3	Fumes	3	Methyl isobutyl ketone	4	Propyl acetate	4
Acrylic Acid	4	Creosote	4	Gangrene	4	Methyl oercaptan	4	Propyl alcohol	4
Acrylonitrile	4	Cresol	4	Garlic	4	Methrlicyclohexane	4	Propyl chloride	4
Adhesives	4	Crotonaldehyde	4	Gasoline	4	Methylcyclohexanol	4	Propyl ether	4
Air-Wick	4	Cyclohexane	4	Heptane	4	Methylcyclohexanone	4	Propyl oercaptan	4
Alcoholic Beverages	4	Cyclohexanol	4	Heptylene	4	Methylene chloride	4	*Propylene	2
*Amines	2	Cyclohexanone	4	Hexane	3	Mildew	3	*Propyne	2
*Ammonia	2	Cyclohexene	4	*Hexylene	3	Mixed odors	4	Putrefying substances	3
Amyl acetate	4	Dead animals	4	Hexyne	3	Mold	3	Putrescine	4
Amyl alcohol	4	Decane	4	Hospital odors	4	Monochlorobenzene	4	Pyridine	4
Amyl ether	4	Decaring Substances	4	Household smells	4	Moth balls	4	Radiation products	2
Animal odors	3	DeodorantsDetergents	4	Hydrogen	1	Naphtha (coal tar)	4	Radon	3
Anesthetics	3	Dibroeoethane	4	*Hydrogen bromide	3	Naphtha (petroleum)	4	Rancid oils	4
Aniline	4	Dichlorobenzene	4	*Hydrogen chloride	2	Naphthalene	4	Resins	4
Antiseptics	4	Dichlorodifluoromethane	4	*Hydrogen cyanide	3	Nicotine	4	Reodorants	4
Asphalt fumes	4	Dichloroethane	4	*Hydrogen fluoride	2	*Nitric acid	3	Ripening fruits	4
Automobile exhaust	3	Dichloroethylene	4	*Hydrogen iodide	3	Nitro benzenes	4	Rubber	4
Bathroom smells	4	Dichloroethyl ether	4	*Hydrogen selenide	2	Nitroethane	4	Sauerkraut	4
Benzene	4	Dichloronitro* ethane	4	*Hydrogen sulfide	3	*Nitrogen dioxide	2	Sewer odors	4
*Bleaching solutions	3	Dichloropropane	4	Incense	4	Nitroglycerine	4	Skatole	4
Body odors	4	Diesel fumes	4	Indole	4	Nitroethane	4	Slaughtering odors	3
Borane	3	*Diethylamine	3	Inorganic chemicals	3	Nitropropane	4	Smog	4
Bromine	4	Diethyl ketone	4	Incomplete combustion	3	Nitrotoluene	4	Soaps	4
Burned flesh	4	Diethyl aniline	4	Industrial wastes	3	Nonane	4	Smoke	4
Burned food	4	Dinethylsulfate	4	Iodine	4	Noxious gases	3	Solvents	3
Burning fat	4	Dioxane	4	Iodoform	4	Octalene	4	Sour milks	4
Butane	2	Dipropyl ketone	4	Irritants	4	Octane	4	Spilled beverages	4
Butanone	4	Disinfectants	4	Isophorone	4	Odorants	4	Spoiled food stuffs	4
Butyl acetate	4	Embalming odors	4	*Isoprene	3	Onions	4	Stale odors	4
Butyl alcohol	4	Ethane	1	Isopropyl acetate	4	Organic chemicals	4	Stoddard solvent	4
Butyl cellosolve	4	Ether	3	Isopropyl alcohol	4	Ozone	4	Stiffness	4
Butyl chloride	4	Ethyl acetate	4	Isopropyl ether	4	Packing house odors	4	Styrene monomer	4
Butyl ether	4	Ethyl acrylate	4	Kerosene	4	Paint and redecorating	4	*Sulfur dioxide	2
*Butylene	2	Ethyl benzene	4	Kitchen odors	4	Oodors	4	*Sulfur trioxide	3
*Butyne	2	Ethyl bromide	4	Lactic acid	4	Palmitic acid	4	Sulfuric acid	4
Cancer odor	4	*Ethyl anine	3	Lingering odors	4	Paper deterioration	4	Tar	4
Caprylic acid	4	Ethyl benzene	4	Liquid fuels	4	Paradichlorobenzene	4	*Tarnishing gases	3
Carbolic acid	4	Ethyl chloride	3	Liquor odors	4	Paste and glue	4	Tobacco smoke odor	4
Carbon disulfide	4	Ethyl ether	3	Lubricating oils	4	Pentane	4	Toilet odors	4
*Carbon dioxide	1	Ethyl formate	3	Lysol	4	Pentanone	4	Toluene	4
Carbon monoxide	1	Ethyl mercaptan	3	Masking agents	4	*Pentylene	3	Trichloroethylene	4
Carbon tetrachloride	4	Ethyl silicate	4	Medicinal odors	4	*Pentyne	3	Trichloroethane	4
Cellosolve	4	*Ethylene	1	Melons	4	Perchloroethylene	4	Turpentine	4
Cellosolve acetate	4	Ethylene chlorohydrin	4	Menthol	4	Perfumes, cosmetics	4	Urea	4
Charred materials	4	Ethylene dichloride	4	Mercaptans	4	Perspiration	4	Uric acid	4
Cheese	4	Ethylene oxide	3	Mesityl oxide	4	Persistent odors	4	Valeric acid	4
*Chlorine	3	Essential oils	4	Methane	1	Pet odors	4	Valericdehyde	4
Chlorobenzene	4	Eucalyptole	4	Methyl acetate	3	Phenol	3	Vinegar	4
Chlorobutadiene	4	Exhaust fumes	3	Methyl acrylate	4	Phosgene	3	Vinyl chloride	3
Chloroform	4	Female odors	4	Methyl alcohol	3	Pifch	4	Volatile materials	3
Chloronitropropane	4	Fertilizer	4	Methyl bromide	3	Plastics	4	Waste products	4
Chloropierin	4	Film processing odors	3	Methyl butyl ketone	4	Poison gases	4	Wood alcohol	3
Cigarette saoke odor	4	Fish odors	4	Methyl cellosolve	4	Pollen	3	Xylene	4
Citrus and other fruits	4	Fluorotrichloromethane	3	Methyl chloride	3	Popcorn and candy	4		
Cleaning compounds	4			Methyl chloroform	4	Poultry odors	4		