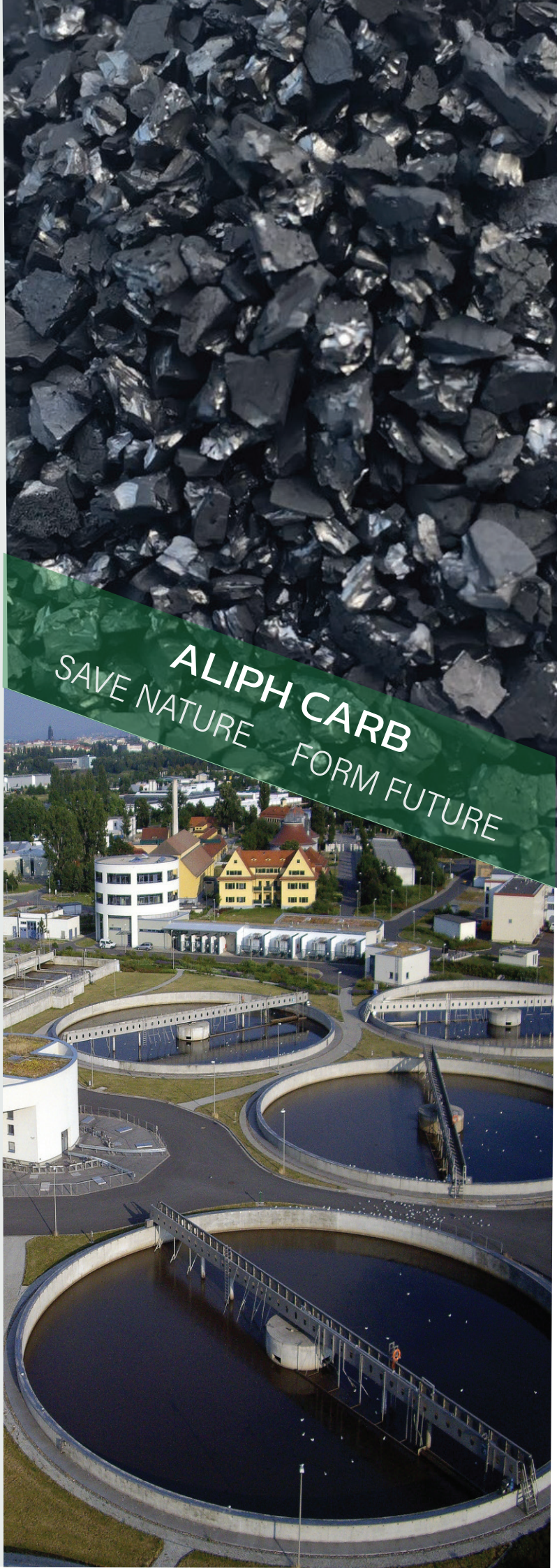
Activated carbon is commonly used to adsorb natural organic compounds, taste and odor compounds, and synthetic organic chemicals in drinking water treatment. Adsorption is both the physical and chemical process of accumulating a substance at the interface between liquid and solids phases. Activated carbon is an effective adsorbent because it is a highly porous material and provides a large surface area to which contaminants may adsorb. The two main types of activated carbon used in water treatment applications are granular activated carbon (GAC) and powdered activated carbon (PAC).

GAC is made from organic materials with high carbon contents such as wood, lignite and coal. The primary characteristic that differentiates GAC to PAC is its particle size. GAC typically has a diameter ranging between 1.2 to 1.6 mm and an apparent density ranging between 25 and 31 lb/ft3), depending on the material used and manufacturing process. The bed density is about 10 percent less than the apparent density and is used to determine the amount of GAC required to fill a given size filter. The uniformity coefficient of GAC is quite large, typically about 1.9, to promote stratification after backwashing and minimize desorption and premature breakthrough that can result from mixing activated carbon particles with adsorbed compounds with activated carbon particles with smaller amounts of adsorbed compounds. Iodine and molasses numbers are typically used to characterize GAC. These numbers describe the quantity of small and large pore volumes in a sample of GAC. A minimum iodine number of 500 is specified for activated carbon by AWWA standards.



Benefits of using shell based Activated Carbon

- Taste and odour forming compounds (compounds such as MIB and geosmin)
- Pesticides including byproducts (e.g. atrazine)
- Colour
- Trihalomethanes and other disinfection byproducts (DBP removal)
- Algal toxins
- Chlorinated hydrocarbons and other volatile organic compounds (VOC removal)
- Endocrine distrupting compounds (EDC removal) and other micropollutants
- Pharmaceutical and personal care products (PPCP removal)
- Purifies carbon-dioxide in carbonated drinks
- Reduction of waterborne diseases
- Tertiary treatment of sewage water and waste water from industrial use
- Decolorization and purification in production processes of various products
- Treatment of minor organic impurities in liquid phase
- Chloramine Removal
- Iron Removal
- Superior Hardness Characteristics

Carbon Grades for Water Applications :

GRADE	PRODUCT NAME	ALIPH CARB PRODUCT CODE	MOISTURE	APPARENT DENSITY	BUTANE ADSOPRTION MIN	ASH	PH	HARDNESS
ASTM 2862			ASTM 2867	ASTM 2854	ASTM D5742	ASTM 2866	ASTM 3838	ASTM 3802
8x30	LOW ACTIVITY	ACW830FYZ	5% Max	450-550KG/CC	19.60%	3% Max	9 to 11	99%
8x30	MEDIUM ACTIVITY	ACW830FFY	5% Max	450-550KG/CC	21.56%	3% Max	9 to 11	99%
8x30	HIGH ACTIVITY	ACW830SZ	5% Max	450-550KG/CC	23.52%	3% Max	9 to 11	99%
8x30	HIGHEST ACTIVITY	ACW830SFY	5% Max	450-550KG/CC	25.49%	3% Max	9 to 11	99%
12x30	LOW ACTIVITY	ACW123FYZ	5% Max	450-550KG/CC	19.60%	3% Max	9 to 11	99%
12x30	MEDIUM ACTIVITY	ACW123FFY	5% Max	450-550KG/CC	21.56%	3% Max	9 to 11	99%
12x30	HIGH ACTIVITY	ACW123SZ	5% Max	450-550KG/CC	23.52%	3% Max	9 to 11	99%
12x30	HIGHEST ACTIVITY	ACW123SFY	5% Max	450-550KG/CC	25.49%	3% Max	9 to 11	99%
12x40	LOW ACTIVITY	ACW124FYZ	5% Max	450-550KG/CC	19.60%	3% Max	9 to 11	99%
12x40	MEDIUM ACTIVITY	ACW124FFY	5% Max	450-550KG/CC	21.56%	3% Max	9 to 11	99%
12x40	HIGH ACTIVITY	ACW124SZ	5% Max	450-550KG/CC	23.52%	3% Max	9 to 11	99%
12x40	HIGHEST ACTIVITY	ACW124SFY	5% Max	450-550KG/CC	25.49%	3% Max	9 to 11	99%
14x40	LOW ACTIVITY	ACW144FYZ	5% Max	450-550KG/CC	19.60%	3% Max	9 to 11	99%
14x40	MEDIUM ACTIVITY	ACW144FFY	5% Max	450-550KG/CC	21.56%	3% Max	9 to 11	99%
14x40	HIGH ACTIVITY	ACW144SZ	5% Max	450-550KG/CC	23.52%	3% Max	9 to 11	99%
14x40	HIGHEST ACTIVITY	ACW144SFY	5% Max	450-550KG/CC	25.49%	3% Max	9 to 11	99%
18x40	LOW ACTIVITY	ACW184FYZ	5% Max	450-550KG/CC	19.60%	3% Max	9 to 11	99%
18x40	MEDIUM ACTIVITY	ACW184FFY	5% Max	450-550KG/CC	21.56%	3% Max	9 to 11	99%
18x40	HIGH ACTIVITY	ACW184SZ	5% Max	450-550KG/CC	23.52%	3% Max	9 to 11	99%
18x40	HIGHEST ACTIVITY	ACW184SFY	5% Max	450-550KG/CC	25.49%	3% Max	9 to 11	99%
20x50	LOW ACTIVITY	ACW205FYZ	5% Max	450-550KG/CC	19.60%	3% Max	9 to 11	99%
20x50	MEDIUM ACTIVITY	ACW205FFY	5% Max	450-550KG/CC	21.56%	3% Max	9 to 11	99%
20x50	HIGH ACTIVITY	ACW205SZ	5% Max	450-550KG/CC	23.52%	3% Max	9 to 11	99%
20x50	HIGHEST ACTIVITY	ACW205SFY	5% Max	450-550KG/CC	25.49%	3% Max	9 to 11	99%

ASTM STANDARDS

Testing Procedure

Analysis	ASTM Standards
Particle size distribution	D 2862
Moisure (%)	D 2867
Butane adsoprtion (%)	D 5742
Iodine Value (mg/g)	D 4607
Ash (%)	D 2866
pH	D 3838
Hardness	D 3802

ALIPH CARB

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