GRANULAR ACTIVATED CARBON

Granular Activated Carbon is manufactured from the best hardest and purest quality Coconut Shell Charcoal. The quality of coconut shell charcoal is of prime importance and therefore, special care is to be taken in the selection of it. Coconut shell charcoal is the hardest charcoal available to manufacture Granular Activated Carbon of very high hardness/Abrasion Number to result minimum attrition losses during columns operation.

Here we manufacture **Granular Activated Carbon by Steam Activation Process** in a controlled manner super heated high pressure steam and air injected over carbon bed in a rotary kiln at about 800-1000^{o}C temperature. This activation process opens the microspores and thereby increasing its surface area. Surface area after steam activation is to the extent of 800 to 1000 m^2/gm.This increases the capacity of adsorption of the carbon.

The activated material as coming out from the kiln is disintegrated and screened to the desired mesh size.

APPLICATION: There are numerous applications of Granular Activated Carbons. We list out a few below.

1. To dechlorinate process water. To remove oil from condensate.
2. To remove oil vapour from the gas stream in fertilizer plants.
3. Deoiling of compressed gases.
4. In amine guard system in manufactured of Ammonia.
5. Removal or Recovery of mercury from effluents of "Alkali" industries.
6. In adsorption of radio active gas.
7. In the manufacture of heavy water.
8. Solvent recovery.
9. In the removal or dissolved organics.
10. As a deodorizer.
11. Purification of drinking water and air.

SPECIFICATION OF GRANULAR ACTIVATED CARBON FOR DISTILLARY FOR ALCOHOL TREATMENT

THE IMPORTMENT FEATURES OF OUR CARBON ARE AS UNDER

Firstly, the carbon is activated to a high degree by creating a very high surface area to the extent of 800m^2/gm.This enable the undesirable impurities to be removed rapidly and completely, Also this superior carbon will last you much longer than the type being presently used.

Secondly, the carbon does not add any alkalinity to the liquor. We have given special treatment to ensure neutrality of the carbon. It is very crucial that the carbon has no uncarbonize matter as it can totally ruin the spirit. This can guarantee by only a high activated carbon, like ours.

DETERMINATION OF IODINE ADSORPTION VALUE OF ACTIVATED CARBON (GRANULAR)

PROCEDURE

Take about 5 Gm of Granular Carbon sample. Grind enough quantity to pass through 75 micron US sieves (about 1 gm), weigh very accurately 0.2 gm of powdered carbon and introduce it in the iodine flask. Introduce 40 ml of 0.1N iodine solution. Shake the contents for exactly four minutes. Filter through Whatman filter paper No. 1. Take 10 ml of filtrate and titrate against standard sodium thiosuphate solution.

CALCULATIONS

SOLUTIONS REQUIRED

a) 0.1N iodine solution
b) 0.05N sodium thiosulphate solution
c) 0.1N (exact) potassium iodate solution

i) Standardisation of 0.05N Na2s2O3 against 0.1N KIO3 using starch indicator.
ii) Standardisation of I2 solution against standardised Na2S2O3 using starch solution as indicator. Suppose, the normality is 0.103 of Iodine
iii) Calculate the quantity of I2 in 40 cc of 0.103 Normality. 1N in 1000cc contains 127 gm of iodine.

Therefore, 0.103 N in 40 cc contains

127 x 0.103 x 40 divided by 1000 = 0.523 gm

Calculate the normality of the filtrate (after adsorption) and calculate the quantity of Iodine in 40 cc after adsorption. Suppose the reading of thio is 11.4cc (Normality of thio is 0.05N).

10 x X = 11.4 x 0.05
X = 0.057N of I2 after adsorption.
Therefore, 1N in 1000cc = 127 gm of Iodine

0.057N in 40cc = 127 x 0.057 x 40 divided by 1000
Quantity of Iodine after adsorption = 0.28956
Quantity of original Iodine is 0.523
Therefore quantity if Iodine adsorbed = 0.523 minus 0.290
= 0.233gm, or 233 mg.
Therefore Iodine adsorption = 233 x 5 = 1165 mg/gm

QUALITY OF REAGENTS

Unless specified otherwise, pure chemicals and distilled water (see IS 1070:1992) shall be used in tests.

NOTE: 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the results of analysis.

ACTIVATED CARBON - GRANULAR

(Coconut shell charcoal base)

SPECIFICATION OF THE PRODUCT:- (REF.NO. AG)

1	**NAME OF THE PRODUCT**	**ACTIVATED CARBON - GRANULAR**							
2	**GRADE**	**AG-400**	**AG-500**	**AG-600**	**AG-700**	**AG-800**	**AG-900**	**AG-1000**	**AG-1100**
3	**DESCRIPTION**	Black dense granular							
4	**SOURCE OF MATERIAL**	Coconut shell charcoal base							
5	**IODINE ADSORPTION mg/gm (± 25)**	400	500	600	700	800	900	1000	1100
6	**% BENZEN ADSORPTION**	10	12	14	16	19	21	23	25
7	**TOTAL SURFACE AREA m^2/gm (±25)**	400	500	600	700	800	900	1000	1100
8	**HARDNESS NO.**	90-95	90-95	90-95	85-90	85-90	80-85	80-85	75-80
9	**BULK DENSITY gm/cc**	0.65	0.62	0.60	0.55	0.52	0.50	0.45	0.42
10	**pH OF 1% WATER EXTRACT**	9-10	9-10	9-10	9-10	9-10	9-10	9-10	9-10
11	**% ASH CONTENT**	3-5	3-5	3-5	3-5	3-5	3-5	3-5	3-5
12	**% SILICA CONTENT (MAX)**	3	3	3	3	3	3	3	3
13	**% MOISTURE CONTENT (MAX)**	3	3	3	3	3	3	3	3
14	**CTC ADSORPTION MIN**	10 to 12	15 to 17	18 to 20	20 to 22	28 to 30	38 to 40	48 to 50	58 to 60
15	**PARTICLE SIZE 7.5% TOLERANCE EACH WAY**	Any sieve size can be supplied like 4, 4/8, 4/16, 8/16, 8/30, 16/40 ETC.							
	PACKING	25/50 Kg HDPE woven sacks with inside of polyethylene bag.							
	PRICE Rs. Per Kg.								

Terms:
(1) Excise Duty: presently not applicable. If applicable in future, it will be extra.
(2) VAT @ 5% (Currently)/CST @ 2% against form 'C'. (3) Delivery: Ex-works, Gorwa, Baroda
(4) Others: Freight, insurance extra, & other levies, if applicable, it will also be extra.
(5) Minimum quantity: 500 Kg. (6) Delivery period: 8 to 10 days.