



Indian Minerals Yearbook 2014 (Part- III : Mineral Reviews)

53rd Edition

FULLER'S EARTH

(FINAL RELEASE)

**GOVERNMENT OF INDIA
MINISTRY OF MINES
INDIAN BUREAU OF MINES**

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Fuller's earth, like bentonite, is also known as 'bleaching clay' because of its inherent bleaching properties. Fuller's earth is non-plastic clay that can be used to decolorise, filter and purify animal, mineral & vegetable oils and greases. It has great commercial importance like bentonite. Bentonite is a swelling-type clay but fuller's earth is a non-swelling-type clay. This property difference is because of their chemical composition. Bentonite contains sodium, whereas fuller's earth contains calcium. Calcium bentonite, more commonly called fuller's earth, can be converted into sodium bentonite by cation exchange process or acid activation.

RESOURCES

The total reserves/resources of fuller's earth as per UNFC system as on 1.4.2010 are placed at 256.7 million tonnes. Out of these, only 58,200 tonnes are placed under 'reserves' category while about 256.6 million tonnes (99.98%) are placed under

'resources' category. About 74% of the total resources are located in Rajasthan. The remaining resources are in Andhra Pradesh, Arunachal Pradesh, Assam, Karnataka and Madhya Pradesh. The statewise reserves/resources of fuller's earth are given in Table-1.

PRODUCTION

Fuller's earth is declared as minor mineral under Mines and Minerals (Development and Regulation) Act, 1957. The value of fuller's earth produced in India in 2012-13 at about ₹31 crore was higher by 28% as compared to the previous year. The production was reported from the States of Andhra Pradesh, Jammu & Kashmir, Karnataka, Madhya Pradesh & Rajasthan.

Andhra Pradesh was leading producer accounted for 74% of the total value of production of fuller's earth followed by Rajasthan with 16% and the remaining 10% was shared by Madhya Pradesh (5%), Karnataka (4%) & Jammu & Kashmir (1%) (Table - 2).

**Table – 1 : Reserves/Resources of Fuller's Earth as on 1.4.2010
(By States)**

Grade/State	(In tonnes)						
	Reserves			Remaining resources			Total resources (A+B)
	Proved STD111	Probable STD122	Total (A)	Indicated STD332	Inferred STD333	Total (B)	
All India : Total	–	58200	58200	912340	255681539	256593879	256652079
Unclassified Grade : Total	–	58200	58200	912340	255681539	256593879	256652079
By States							
Andhra Pradesh	–	–	–	–	25523983	25523983	25523983
Arunachal Pradesh	–	–	–	10700	20000000	20010700	20010700
Assam	–	–	–	–	18860000	18860000	18860000
Karnataka	–	58200	58200	551640	1471276	2022916	2081116
Madhya Pradesh	–	–	–	–	117200	117200	117200
Rajasthan	–	–	–	350000	189709080	190059080	190059080

Figures rounded off.

**Table – 2 : Value of Production of Fuller's Earth
2010-11 to 2012-13(P)
(By States)**

(In ₹'000)			
State	2010-11	2011-2012	2012-13(P)
India	192003	242420	309502
Andhra Pradesh	142457	204276	229243
Jammu & Kashmir	-	-	3631
Karnataka	7055	11667	13378
Madhya Pradesh	2295	2387	14550
Rajasthan	40196	24090	48700

Source: State Governments.

INDUSTRY

Fuller's earth Corporation has its own Fuller's Earth mines located at Village Proddutur, Shankarpally Mandal, Ranga Reddy distt, Telengana. The ownership of mines enables it to maintain uniform quality of raw material that is used for manufacturing Activated Bleaching earth.

USES

Fuller's earth is used to decolourise, deodorise, dehydrate and neutralise various minerals, vegetable, animal oils, etc. It is also used in the manufacture of No Carbon Required (NCR) papers. Of late, the growth in consumption in these Sectors, has been affected because of the advent of more sophisticated techniques in refining and due to availability of effective substitutes like activated bauxite and magnesium silicate. Fuller's earth is generally used in Fertilizer Industry as a carrier. In animal feed, fuller's earth is used as binders for pelletised feeds, carriers of supplement free flowing additives for feed in flour and lubricants to reduce dye friction. Consumption, however, is expected to rise in other unconventional uses as absorbent, for cleaning oil spillage on factory floors; as carrier for insecticides, fungicides; and as a mineral filler & extender.

CONSUMPTION

The estimated consumption of fuller's earth remained unchanged at 5,600 tonnes in 2013-14. Vanaspati Industry, the largest consumer, accounted for about 91% consumption, followed by Chemical Industry with 5%. A sizeable quantity is consumed in rural and urban areas for non-industrial uses like plastering mud walls and washing of hair. However, the consumption data for such non-industrial purposes are not available (Table-3).

**Table- 3: Consumption of Fuller's Earth
2011-12 to 2013-14(P)
(By Industries)**

(In tonnes)			
Industry	2011-2012	2012-13(R)	2013-14 (P)
All Industries	5600	5600	5600
Chemical	300(1)	300(1)	300(1)
Petroleum refining	200(3)	200(3)	200(3)
Vanaspati	5100(12)	5100(12)	5100(12)

Figures rounded off.

Figures in parentheses denote the number of units in organised sector reporting consumption.*

*(*Includes actual reported consumption and/or estimates made wherever required).*

WORLD REVIEW

The world production of fuller's earth increased marginally to 3.5 million tonnes in 2013 from 3.4 million tonnes in 2012. The USA was the top producer, accounted for about 58% of the world production. Other principal producers were Spain (17%), Mexico (9%) and Senegal (7%) (Table-4).

FOREIGN TRADE

There were no exports and imports of fuller's earth during 2012-13 & 2013-14.

**Table- 4: World Production of Fuller's Earth
(By Principal Countries)**

(In '000 tonnes)			
Country	2011	2012	2013
World: Total*	3131	3400	3500
Australia ^e	14 ^c	17 ^c	11
India ^e	6	6	6
Japan ^e	110	110	110
Korea, Rep. of	47	58	51
Mexico	107	227	301
Morocco	104	100 ^e	100 ^e
Pakistan	7	10	4
Senegal (Attapulgit)	180	181	235
South Africa (Attapulgit)	14	16	21
Spain (Attapulgit & Sepiolite)	592	646	602
USA	1950	1980	2040 ^e
Other countries	-	49	19

Figures rounded off.

Source: World Mineral Production, 2009-2013.

** Including Attapulgit & Sepiolite.*

