



# **Indian Minerals Yearbook 2021**

**(Part- III : Mineral Reviews)**

**60<sup>th</sup> Edition**

## **MINOR MINERALS**

### **30.10 FULLER'S EARTH**

**(ADVANCE RELEASE)**

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## 30-10 Fuller's Earth

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 decolourise, 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.

### RESERVES/RESOURCES

The total reserves/resources of fuller's earth in India as on 1.4.2015 as per NMI database, based on UNFC system has been estimated at 261.38 million tonnes. Out of these, only 3.94 million tonnes are placed under 'Reserves' category while 257.4 million tonnes (98.49%) are placed under 'Remaining Resources' category. About 74% of the total

resources are located in Rajasthan while the remaining resources are in Telangana (10%), Arunachal Pradesh (8%) and Assam (7%). Negligible quantities are also reported from Karnataka and Madhya Pradesh. The Statewise reserves/resources of fuller's earth are furnished in Table-1.

### PRODUCTION

As defined in Clause (e) of the Section-3 of MM(DR) Act 1957, 'fuller's earth' has been declared as 'Minor Mineral', hence the producers report the production data directly to the respective States and not to IBM. However, efforts were made to collect this information through correspondence with the State Directorates of Mining and Geology of individual States or visiting their websites. But data of only a few States could be collected. All possible information/data that could be gathered has been presented in this Review.

Statewise production of fuller's earth during 2018-19 to 2020-21 is furnished in Table-2.

**Table – 1 : Reserves/Resources of Fuller's Earth as on 1.4.2015  
(By States)**

Grade/State	Reserves		Remaining Resources				Total Resources (A+B)
	Proved STD111	Total (A)	Pre-feasibility STD222	Indicated STD332	Inferred STD333	Total (B)	
	(In tonnes)						
<b>All India : Total</b>	<b>3941000</b>	<b>3941000</b>	<b>58200</b>	<b>912340</b>	<b>256467419</b>	<b>257437959</b>	<b>261378959</b>
<b>Unclassified Grade : Total</b>	3941000	3941000	58200	912340	256467419	257437959	261378959
<b>By States</b>							
Arunachal Pradesh	-	-	-	10700	20000000	20010700	20010700
Assam	-	-	-	-	18860000	18860000	18860000
Karnataka	-	-	58200	551640	1557156	2166996	2166996
Madhya Pradesh	-	-	-	-	117200	117200	117200
Rajasthan	3941000	3941000	-	350000	190409080	190759080	194700080
Telangana	-	-	-	-	25523983	25523983	25523983

Figures rounded off. Note : " - " Nil

**Table-2 : Statewise Production of Fuller's Earth**

(In tonnes)

State	Year		
	2018-19	2019-20	2020-21
Telangana	547096	597205	-
Rajasthan	64000	22000	28297
Karnataka	6198	3299	32958

*Source: As received from State DGMs and their websites.**Note: "-" NA*

## USES & SPECIFICATIONS

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.

## WORLD SCENARIO

World resources of clays including fuller's earth are quite large, hence country specific data is not available. USA is the major producer. Other major producers are Spain, Mexico and Senegal.