



RXSOL

CHEMO PHARMA INTERNATIONAL

Technical Data Sheet (TDS)

RXSOL-81-8101-050

Bentonite Powder

Description: It is a drilling - grade Bentonite which is naturally occurring clay .It is a High Yield Natural Sodium montomorillonite. It meets API 13A Standards.

Application :

- It is Viscosifier and Filtration control agent for water based Mud Systems.
- It is used in drilling muds for controlling bore hole stability. It is utilized in drilling muds to extract drill cuttings from the bit.
- It is also used for clearing cat litter.

Advantage

- It helps improve hole cleaning capacities of drilling fluids.
- It is effective as a filtering agent.
- It promotes borehole stability.
- It can be added directly to fresh water or fresh water based drilling fluids.

Physical Analysis:

Montmorillonite Content : 70-72%

PROPERTIES	PROTOCOL	UNIT	REQUIRED	RESULT
Viscometer Dial Reading at 600 rpm	API Spec. 13A:2004/ ISO 13500: 1998	r/min	30	36
Specific Viscosity	Mud Speed		Min. 1	1.15
Yield Point / Plastic Viscosity Ratio	API Spec. 13A:2004/ ISO 13500: 1998	–	3 Max	2.5
Water Absorption Rate	-	-	Min 450	550-600%
Filtrate Volume	API Spec. 13A:2004/ ISO 13500: 1998	ML	15 Max	14.6
Swelling Index	More Than 19		Min. 17	19
Moisture Content	API Spec. 13A:2004/ ISO 13500: 1998	% by weight	10.0 max.	9
Colloidal Valence	-	-		100%
Dry Screen Analysis(Residue Greater than 75 Microns)%	API Spec. 13A:2004/ ISO 13500: 1998	% by weight	4.0 max.	3.0 - 4.0
pH Value	pH Standard Meter		8 - 9	9
Wet Strength	More Than 0.505kg/cm2			

Physical State	:Free Flowing Powder
Viscometer Dial reading at 600 r/min	: Min 30
Yield Point/Plastic Viscosity Ratio	: Max 3
Residue of diameter greater than 75um	: Max mass friction 4,0%
Filtrate Volume	: Max 15.0 Cm3
Moisture	: 10% wt percent max

Packing : 50 Kgs, 1000 Kgs and 1500 Kgs Jumbo Line Bag

Difference Between Sodium Bentonite and Calcium Bentonite :

Bentonite is naturally occurring hydrated Alumina Silicate, there are two main varieties, calcium and sodium, where sodium Bentonite is the more commercially important. Calcium Bentonite deposits are much more common than sodium Bentonite deposits. However, calcium Bentonite can be changed to sodium Bentonite by the ion exchange process. The swelling type or sodium Bentonite, which has single water layer particles containing Na⁺ as the exchangeable ion. The other has double water layer particles with Ca⁺⁺ as the exchangeable ion. It is called calcium Bentonite or non-swelling type. The clay-water characteristics are of primary importance. The chemical composition of the Bentonite is a consideration only because changes in physical properties accompany changes in chemical composition. Sodium Bentonite swells or expands to a greater degree than its calcium equivalent. Small percentage of cation exchange sites are occupied by another ion, such as calcium, a state is developed in the clay which promotes both optimum swelling and fastest hydration. Sodium Bentonite has higher swelling capacity, this property develops higher viscosity in suspensions, greater state of disaggregation, formation of smaller clay particles or greater colloidal properties.

Composition of Bentonite	Percentage value
Part Number	RXSOL-81-8101-050
SiO ₂	70,A2%
Al ₂ O ₃	15.9,A1.5%
Fe ₂ O ₃	2.3,A0.1%
FeO	0.95,A0.1%
CaO	0.96, A0.1%
MgO	1.91, A0.1%
NaO	1.80, A0.1%
TiO ₂	0.04, A0.01%
K ₂ O	0.78, A0.01%
Caustic Soda	0.55, A0.1%

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