

Technical Data Sheet

VARAN[®]

VARAN[®] is a precisely blended, cost effective activated sodium bentonite for green sand moulding.

Varan[®] is selectively mined premium grade bentonite for foundry use which has earned a respected name in the international market. It is made from 100% clay extrusion process making its performance to high standards and uniform behavior.

Product Features:

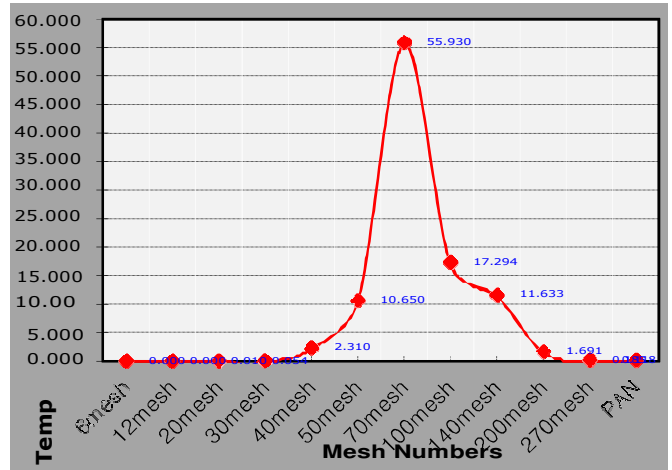
- Better mould strength both for Wet Tensile and Green compression.
- Quick assimilation of water resulting in short preparation time.
- Increased shakeout properties.
- High thermal stability

Technical Specification:

Free Swelling Volume	28 - 33 ml
MBA Value	390-400 mg/gm
Green Compressive Strength (GCS)	8.8 min N/Cm ²
Green Compressive Strength (Calcined to 550 deg C)	7.5min N/Cm ²
Wet Tensile Strength	0.22 N/Cm ² min.
Wet Tensile Strength (Calcined to 550 deg C)	0.17 min N/Cm ²
Compactibility	45% min
Moisture	10-12% max
pH	9-10.5

Remarks: - *All Test standards as per VDG*

The value of WTS & GCS depicted in the table is as per following sand graph generally in the range of sand AFS 55-65



Chemistry: (as measured in ICP-OES)

Silica as (SiO ₂)	48%
Alumina as (Al ₂ O ₃)	20%
Iron as (Fe ₂ O ₃)	12%
Calcium as (CaO)	2.3%
Magnesium as (MgO)	2.5%
Sodium as (Na ₂ O)	2.9 3%
Potassium as (K ₂ O)	0.08%

Particle Size Analysis

#200 Mesh Passing through	80%-86%
#325 Mesh Passing through	60%-75%

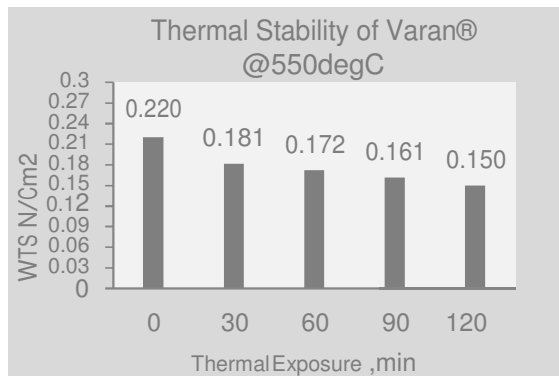
Technical Advantage:

Varan® provides a min WTS value of 0.22 N/cm² on simple addition of 5% on new sand, which is among the highest as per industry standards. Higher WTS in the system sand is always desirable to prevent scabs and related defects. Regular use in the system sand reduces the dead clay percentage and less moisture is required to achieve the green sand moulding properties. On long term usage, consumption of Varan® is considerably reduced thereby giving economic benefit.

Thermal Stability:

Effect of temperature on WTS:

Varan® can maintain its strength upon exposure to high temperature which is most demanding in green sand for better shake out.



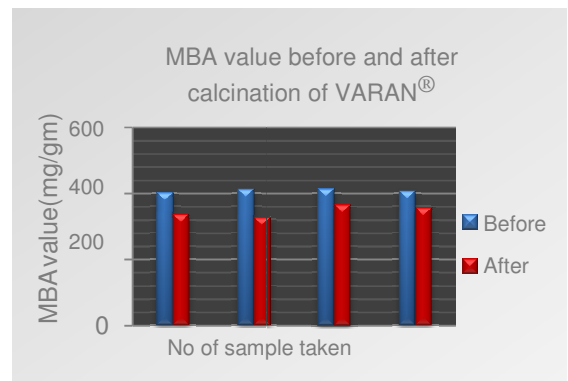
The graph shows the data when Varan® is exposed at uniform temperature of 550 degC with variable time span. Despite continuous exposure to heat, the Wet Tensile Strength is maintained.

Effect of temperature on MBA value:

Standard-as per VDG p69

The following test was carried out on four different Varan® production sample after calcination at 550degC temperature for 30mins.

It is seen that the rate of thermal degradation in Varan® is in the range of 15%-20%.



Varan® is available in following packing types:
Jumbo bags of capacity up to 1250 kg
50 kg HDPE bags
25 kg paper bags



[Star Export House accreditation by Govt. of India]

ISO 9001 : 2015 Quality System

Corporate & Marketing Office :

32A,Chittaranjan Avenue, Calcutta 700012, India

Ph: +91 33 4007 2855 | Mobile: +91 9831013136

Fax: +91 33 2212 2040

Email: amrfeo@amrfeo.com or amrfeo@gmail.com

Web : www.amrfeo.com

Bentonite Processing plant :

Survey no: 583/1 plot 2-6, Bhuj Bacaho Road

Kutch – Gujarat , India

Only in-house production & process:

Bentonite | Drilling Polymer & Cellulose | Drilling Foam | Bentonite Pellets| Super Absorbent Clay