



BENTONITE

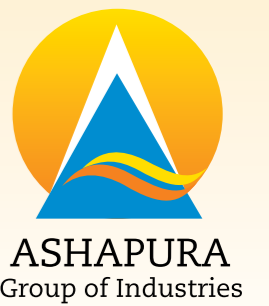


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Ashapura Group

- ▶ Ashapura provide a wide range of multi-mineral solutions that touch billions of lives every moment, every day!
- ▶ Largest Bentonite provider in India
- ▶ Worlds 3rd largest producer of Bentonite
- ▶ Highest market share in foundry
- ▶ Ashapura is India's largest multi-mineral solutions provider and responsible for moving almost 10 MMT of various minerals annually



Our Presence

Three Bentonite Production facilities in Kutch and processing facility located in Manglore.

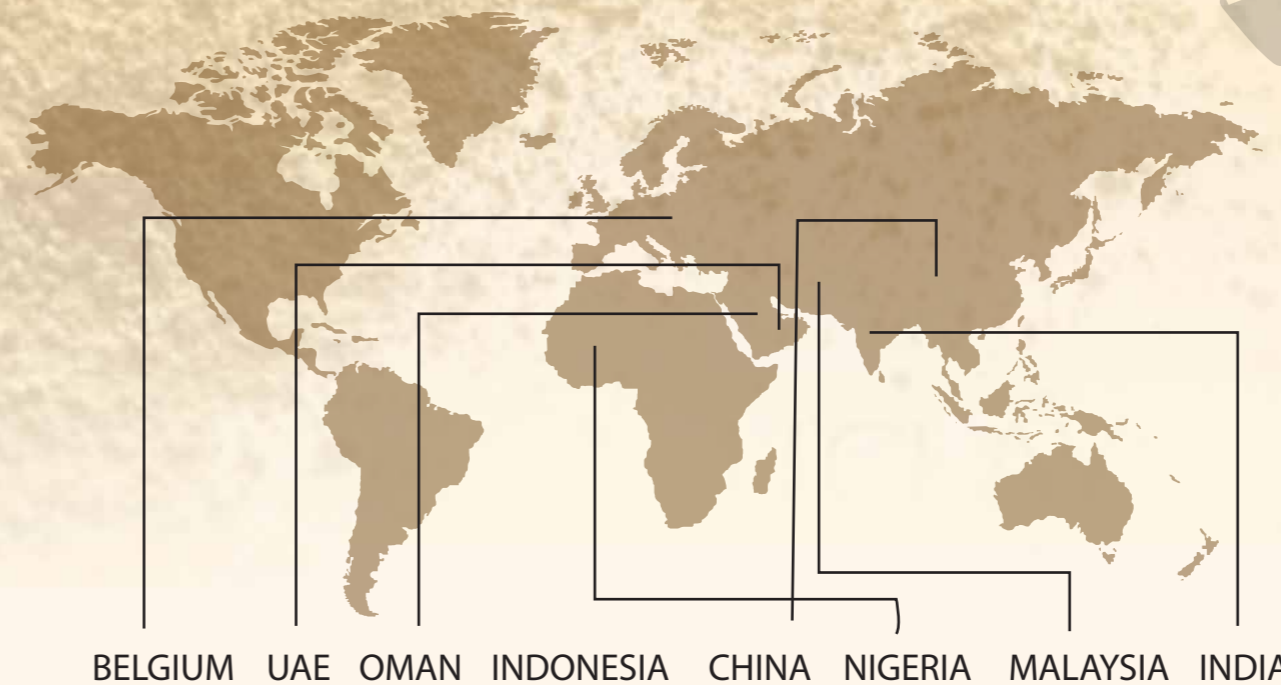
Bentonite resources

more than 60 Millions Tonns

Processing Capacity

Mining & Activation	1.2 Million MT
Grinding	5 Lacs
Granulation	50,000 MT

Ashapura Presence Worldwide



Innovation and Knowledge Centre

The centralized R&D centre at Ashapura i.e. the Innovation & Knowledge Centre, IKC is the bedrock of our Research & Development activities

- ▶ IKC caters to customer needs right from the product development stage to product establishment
- ▶ Strong focus on value added products

Major Equipment

- ▶ XRF and ICP for chemical analysis
- ▶ SEM for microstructure studie
- ▶ XRD for Mineral phase identification
- ▶ Particle size analysers
- ▶ Viscometer for rheology of slurry
- ▶ Optical property testing equipment



Analytical Laboratory Division

Supports the quality control efforts



Product Development Division

Focus on the development of value-added products



Mineral Processing Division

Equipped with relevant instrumentation for undertaking mineral beneficiation and value-addition

Industries We Cater

Major Applications

- ▶ Foundry
- ▶ Iron Ore Pelletization
- ▶ Civil Engineering
- ▶ Drilling
- ▶ Pet litter

Advanced Applications

- ▶ Paper
- ▶ Geo Synthetic Clay Liners
- ▶ Ceramics
- ▶ Animal Feed
- ▶ Fertilizers
- ▶ Cosmetics & Detergents
- ▶ Effluent treatment
- ▶ Water proofing
- ▶ Pharma and Catalysts





Foundry Product Range

▶ **Ultrabond**
Very good swelling volume and Methylene blue Absorption

▶ **Versobond**
High wet tensile strength

▶ **HiBent**
High GCS and WTS

▶ **Thermobond**
Blend of different Bentonite for higher thermal durability

▶ **Smecton 6**
Premix of Bentonite and carbonaceous material

Plant Infrastructure

Multiple location Bentonite production facilities in Kutch

Bentonite Production Facilities



Bhuj Plant

▶ Expansion for growing needs

Baraya Plant

- ▶ Located near Mundra
- ▶ Largest Mineral processing complex
- ▶ State of the art Manufacturing facility



Hamla Plant

- ▶ Strategically located
- ▶ State of the art Manufacturing facility



Manglore Plant

- ▶ Catering to southern India
- ▶ Logistic ease to customers





Iron Ore Palletization (IOP)

Highbond (IOP)

- ▶ Good absorptive property enables to enhance binding towards fine ore during pelletization or briquetting
- ▶ Improves the green and dry strength
- ▶ Consistent quality parameters

MBI-100

- ▶ With lower dosage, maintains GCS, DCS & Drop Number
- ▶ Less slag formation due to less silica from Bentonite
- ▶ Better air permeability leading to uniform porosity
- ▶ Faster pellet growth rate



Ultrabond

- ▶ High swelling volume and methylene blue absorption value
- ▶ It is widely accepted for its consistent performance
- ▶ Works good with all types of molding setup

Versobond

- ▶ Excellent product for high wet tensile strength
- ▶ Well suited for high pressure line





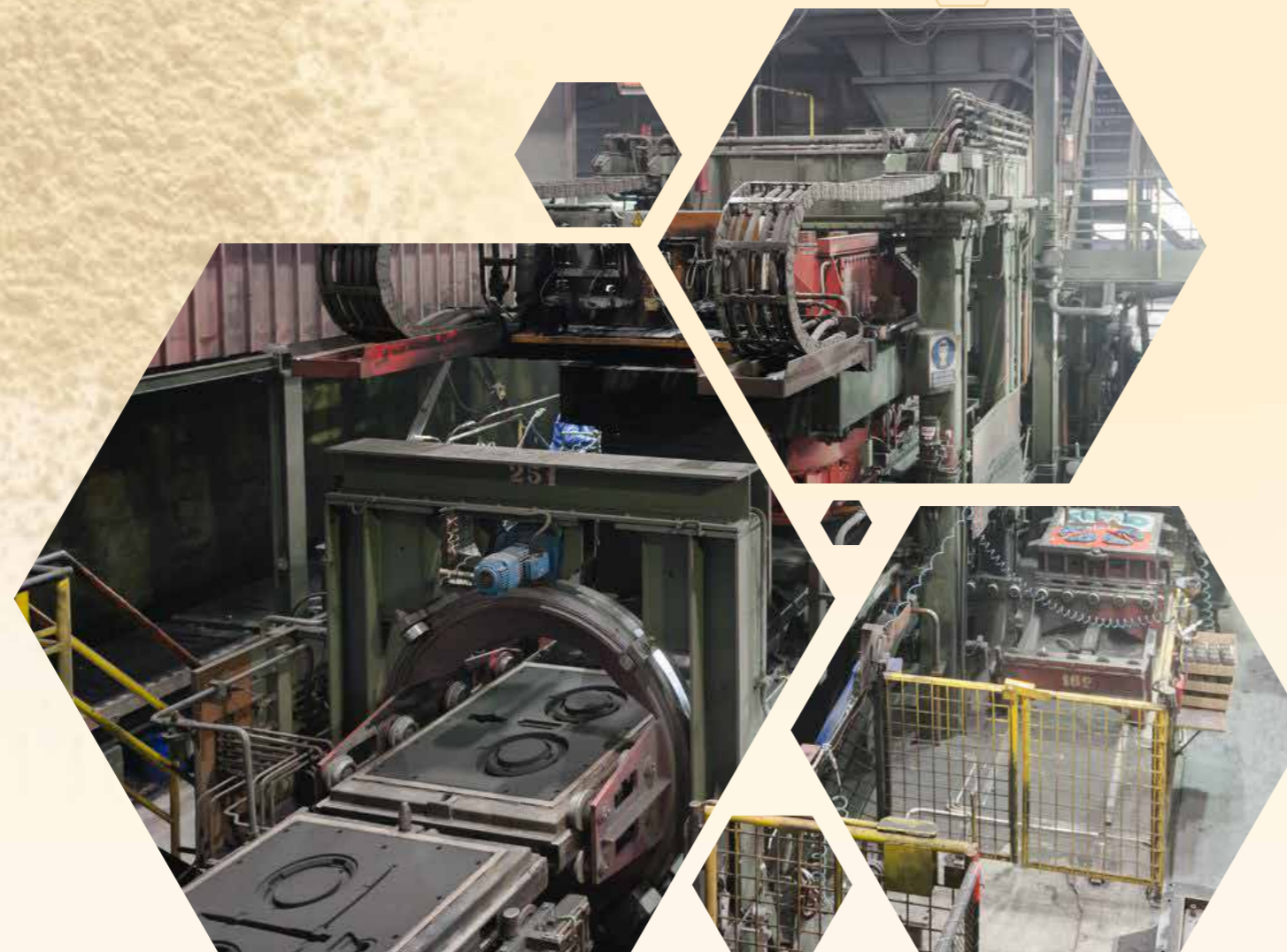
HiBent

Excellent Foundry
Performing Bentonite

- ▶ Reduction of Bentonite addition by 5 -15%
- ▶ Increase in foundry molding system sand GCS with consistent stability.
- ▶ Reduction in Sand Related Defects

Thermobond

- ▶ Blended Bentonite to get higher thermal stability
- ▶ Less burnout and high sustainability
- ▶ It gives good GCS with moderate WTS
- ▶ Reduces addition of Bentonite 10 to 20%



Smecton-6 TH

- ▶ Premix for green sand molding. A customized blend of high quality Bentonite with high VM carbonaceous/coal additive
- ▶ Customized product as per customer need e.g., Bentonite to Coal ratio 80:20, 70:30, 60:40
- ▶ Over all addition reduction 20 to 40% for Bentonite and Coal

Advantages

- ▶ Single product inventory
- ▶ No fire hazards
- ▶ Excellent peel back
- ▶ Reduces metal penetration
- ▶ Good casting surface finish

