

GILSONITE MAKES IT DIFFERENT



HATEF | Commerce
Engineering

HATEF Ltd. Product's Profile Analysis

Soomar the BIGGEST MINE of IRAN serves for OUR SAKES...

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EXECUTIVE

SUMMARY

Product differentiation is a brand-new marketing strategy which businesses use to distinguish a product from similar offerings on the market. The difference could be something concrete, like speed, power, performance and better service. On the other hand, it could be a more ephemeral quality, such as being more friendly or more stylish than your competitors. For enterprise businesses, a product differentiation strategy may provide a competitive advantage in a market dominated by larger companies.

SET POINTS

#1

Based on our experience and insights we understand the importance of the relationship between 'Normal Material' and the final choice of the "Industrial Modified Applications".

For improving the **Asphalt Mixture** properties extends the lifetime of the pavement. In the oilfield as an additive in **Drilling Fluids**, provide lubricity to combat borehole instability problems. It is combined with coal and different ingredients as an additive in **Foundry** sands to insure the quality of the shaped part For **Inks and Paints** sector is widely used because the primary carbon black wetting agent for black news inks and headset and gravure inks. Gilsonite resin also competes well with petroleum-based hydrocarbon resins.

#2

We look forward to be involved in a mutual intend of participation in markets with whoever having desire to enroll in the developing Gilsonite business in the target markets. This matter can come off in a win-win manner by a third foreign company who could be "exclusively" authorized by our marketing license or either by an individual trader with the right deep network and business relations.

HATEF's Gilsonite Supply Chain Production Process

Mining Operation

Mining exploration and production by taking into account specialized technical and economic criteria including margins of percent impurities determined and technical characteristics of underground layers of Lamp product in three below grades categories:

- ✓ 2% < Ash < 5%
- ✓ 5% < Ash < 10%
- ✓ 10% < Ash < 15%
- ✓ 15% < Ash < 20 %

Type	Application
5 %	color and ink industries
5-10 %	drilling and casting
10-15 %	Asphalt, casting and insulation
15 – 20%	Asphalt and insulation

The first class mine's products, according to our the technical and economic criteria, are packaged in a fine large one-tone bags and transported to the complex industrial unit and processed as follows:

- ✓ Physical inspection
- ✓ Screening and separation
- ✓ Clearing
- ✓ Washing
- ✓ drying
- ✓ Separated warehouse

Then, this next step will be based on customers' orders follows grinding on several different mesh scales:

Processed Type	Mesh
Powder	30-40
Micronized	200
Lump	Different sizes



HOT MIX

ASPHALT

Gilsonite Resister[®] Grades

In order to utilize **Gilsonite** in this application, the material must be mixed with the slurry into the hot blend to make the Bitumen. The most proper material here is Gilsonite Powder 200 Mesh. The Gilsonite powder will react with slurry molecules and gradually form the bitumen particles. The heating processes inside production tanks catalyze this reaction.

This **Gilsonite** usage results in supplying a lower price product to end users. Many producers apply Gilsonite where the Natural Bitumen is to be reached at a better price than the slurry from the refinery. This allows mixing Gilsonite with slurry at a **20-80 ratio, decreasing the production cost by 5-10%** on the final product.

HATEF Resister [®] Grades	Useful Temperature Interval (UTI) of Asphalt	Ash	Availability
Resister [®] 340	165 – 180 °c	10% ≤ ash ≤ 15%	✓
Resister [®] 390	180 – 200 °c	15% ≤ ash ≤ 20%	✓

Interesting Fact:

Researches show applying Gilsonite in Asphalt Binder is successful in high performance temperature while it does not affect in low performance temperature.

Benefits of Gilsonite Sealer and Binder:

- Longer life cycle, lower cost of road and runways
- Reduces road closure and downtime
- Penetrates – maintains shape and grooves
- Preserves pavement flexibility, elasticity, and strength

DRILLING MUD

Gilsonite API Grades

Gilsonite based product provides optimum filtration control for in water based muds [**WBM**] and oil base mud [**OBM**] systems. Gilsonite will reduce both **API** and **HTHP filter losses**, provide for a more stable wellbore while drilling troublesome shales and clays, and increase emulsion stability in OBM's.

Gilsonite use in oil-base mud [**OBM**] systems when cement slurry design to combat lost circulation and improve cement slurry properties. About the same time, it was tried and used in water-based drilling fluids to assist in borehole stabilization. By using of it as a fluid is loss agent in oil and synthetic muds, used to seal off low-pressure zones, preventing differential sticking, lubricity, and in low invasion coring fluid, shale stabilizer.

HATEF API Grades	Corresponding Drilling HTHP Filtrate Loss Control (FLC)	Ash	Availability
H-JET 375	High Temp. / High Melting Point / Low Viscosity	≤10 %	✓
H-SEC 360	Low Temp. / High Melting Point / Low Viscosity	≤10 %	✓

Functions of Drilling Fluid loss control (FLC)

- Remove cuttings from the well.
- Control formation pressure.
- Suspend and release cuttings.
- Suspend and release cuttings.
- Seal permeable formations.
- Maintain wellbore stability.
- Minimize reservoir damage.
- Cool, lubricate, and support the bit and drilling assembly.
- Transmit hydraulic energy to tools and bit.
- Ensure adequate formation evaluation.
- Control corrosion
- Facilitate cementing and completion.
- Minimize impact on the environment.
- Prevent gas hydrate formation.

Gilsonite provides all of these benefits:

- Provides wellbore strengthening matrix
- Controls fluid loss and seepage
- superior shale stabilization
- Prevents lost circulation
- Strengthens the wellbore to increase wellbore stability
- Minimizes differential sticking
- Reduces or eliminates lost circulation
- Promotes effective filter cake development
- Performs in oil- and water-based drilling muds
- Performs in HP/HT environments
- Minimizes HSE risks

Worldwide Competitive Product HATEF's Gilsonite

An integral component of premium industries' products...

Lucky manufacturers and traders who want to make differences in the future of their own markets should believe in some binders with huge benefits of characteristics and affordable price. This means they finally find the *"solution"*! In this process, our hands intentionally and precisely are behind their back of decisions to confide buying and applying for modification material sectors.

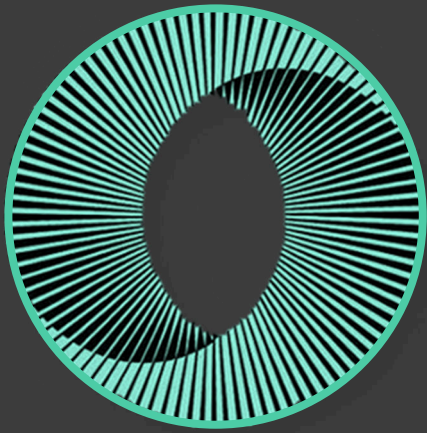


- Oil & Gas
 - ✓ Cementing
 - ✓ Drilling Fluids
- Industries
 - ✓ Foundry
 - ✓ Asphalt
 - ✓ Inks, Paints, Stains

Physical Properties							
Ash	Moisture	Volatile Materials	Softening Point	Melting Point	Specific Gravity	Color in Mass	Color in Streak or Powder
3 - 15 %	1 - 3 %	55 - 70	160 - 200 °C	> 300 °C	1.04 - 1.06	Black	Brown

Elemental Analysis				
C	H	O	N	S
80 - 85	7 - 10	1 - 2	0.5 - 1.5	2 - 6

HATEF's Intelligent Trading System



By unlocking the customer-market value proposition,

We build the finest trading roads so you can all move forward faster.

To ensure that you can progress faster, we build the smart system of solutions.

With our accumulated *know-how*, we are an innovative driver that sets the pace for an entire pavement industry.

Identifying the Inquiries

- Estimating Network Loops
- Determining the financial shape
- Extracting the complicated data

Guidance & Counseling

- Providing competitive price
- Responding effectively
- Resolving the financial hosts

Project Vector Analysis

- Driving convenience to new level
- Modeling competitive landscape
- Developing stronger differentiation

Execute with Insightful Actions

- Helping to benchmark client's value
- Enhancing financial strategy
- Providing Services tailored in line with client's needs

HATEF Engineering & Services [Iran]

The company with intellectual-intelligent trading system and the only authorized “**Exclusive Sale Agent**” of Sealoflex® brand for exporting polymer- modified bitumen. HATEF is privileged to have the confidence resulting from a 12-year experience of being expert in “**dig-in-trading**” for Carbon-Based-Lifeforms products with special applications in targeted markets and industries.



Unit 1, No. 293, North Sohrevardi Ave., Tehran – IRAN.
Post Box: 15875-8467



Tel: (+9821) 88470975
Fax: (+9821) 89786681



www.HATEF.global
info@HATEF.global
China@HATEF.global