

## **GENERAL DESCRIPTION OF GILSONITE IN ASPHALT**

MIXTURE OF GILSONITE INTO ASPHALT RELATES TO A BASE STOCK COMPOSITION COMPRISING A BLEND OF GILSONITE "NATURAL ASPHALT" AND A RUBBER LATEX RESIDUE. THE BASE STOCK MAY BE USED ALONE AS A PAVING MATERIAL OR EMULSIFIED TO FORM A GILSONITE EMULSION HAVING A VARIETY OF USES.

## **GILSONITE IN ASPHALT**

THE PRESENT INVENTION IS DIRECTED TO AN ASPHALT CEMENT COMPOSITION FORMED FROM PETROLEUM ASPHALT, NATURAL ASPHALT, REACTIVE OIL, AND AN ELASTOMER. THE ELASTOMER HAS A GEL CONTENT OF UP TO ABOUT 95 PERCENT BY WEIGHT.

## **DETAIL OF GILSONITE MIXTURE IN ASPHALT**

IT HAS BEEN DISCOVERED THAT ASPHALT CEMENT CAN BE TOUGHENED WITH GILSONITE AND THINNED WITH A REACTIVE OIL. REACTIVE OIL IS AN OIL THAT CONTAINS A HIGH CONTENT OF UNSATURATED FATTY ACIDS. BY USING A REACTIVE OIL, THE OIL WOULD CURE OR REACT AFTER APPLICATION OF THE ASPHALT CEMENT TO THE HIGHWAY, THEREBY ALLOWING FOR A LOWER VISCOSITY APPLICATION BY CURING LATER TO PREVENT "RUTTING."

THE PREFERRED NATURAL ASPHALT IS ASPHALTITE SUCH AS GILSONITE. GILSONITE IS PREFERABLY ONE HAVING A MELTING OR SOFTENING POINT NEAR ABOUT 300° F. SO THAT IT IS MORE EASILY SOFTENED AND BLENDED WITH THE PETROLEUM ASPHALT AT SUCH TEMPERATURES.

## **HOW TO MIX GILSONITE IN ASPHALT:**

AN ASPHALT COMPOSITION CONSISTING ESSENTIALLY OF:

100 PARTS BY WEIGHT OF A PETROLEUM ASPHALT;

FROM ABOUT 1 TO ABOUT 10 PARTS BY WEIGHT OF A NATURAL ASPHALT;

FROM ABOUT 1 TO ABOUT 10 PARTS BY WEIGHT OF A THINNING REACTIVE OIL COMPRISING AT LEAST ABOUT A 60

PERCENT UNSATURATED FATTY ACID CONTENT HAVING FROM ABOUT 14 TO 24 CARBON ATOMS, AND

FROM ABOUT 1 TO ABOUT 10 PARTS BY WEIGHT OF AN ELASTOMER.

## **PACKING OF GILSONITE "NATURAL ASPHALT" LUMP AND POWDER FORM "MICRONIZED"**

GILSONITE IN LUMP FORM LIKE ROCK PACKED IN 500~1000KG JUMBO BAG

GILSONITE 200 MESH PACKED IN 500~1000KG JUMBO BAG

GILSONITE 300 MESH PACKED IN 500~1000KG JUMBO BAG



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GILSONITE-ASPHALT

- GILSONITE 30-40 MESH PACKED IN 500~1000KG JUMBO BAG
- GILSONITE 100 MESH PACKED IN 500~1000KG JUMBO BAG
- GILSONITE 300 MESH PACKED IN 25KG PP BAG
- GILSONITE 200 MESH PACKED 25KG MULTI PAPER BAG
- GILSONITE 200 MESH PACKED 50LBS MULTI PAPER BAG
- GILSONITE 30-40 MESH PACKED PP BAG ON PALLET
- BULK ON VESSEL



### SPECIFICATION OF GILSONITE

NO	TEST	RESULT	TEST METHOD
1	ASH CONTENT,WT%	5	ASTM-D3174
2	MOISTURE CONTENT,WT%	1%	ASTM-D3173
3	VOLATILE MATTER,WT%	63	ASTM-D3175
5	SOLUBILITY IS CS2,WT%	81	ASTM-D4
6	SPECIFIC GRAVITY @25 C	1.11	ASTM-D3289
7	NORMAL HEPHTHAN INSOLUBLES,WT%	79	ASTM-D3279
8	COLOR IS MASS	BLACK	-----
9	COLOR IN STREAK OR POWDER	BLACK	-----
10	SOFTENING POINT,C	175	ASTM-D36
11	PENETRATION @25C	0	ASTM-D5
<b>ELEMENT ANALYSIS</b>			
1	CARBON,WT%	84	ASTM-D5291
2	HYDROGEN,WT%	7.1	ASTM-D5291
3	NITROGEN,WT%	3.67	ASTM-D5291
4	OXYGEN,WT%	3.1	ASTM-D5291
5	SULPHURE,WT%	4	LECO(S)ANALYZER

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