



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

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 CS ₂ ,WT%	81	ASTM-D4
6	SPECIFIC GRAVITY @25 C	1.11	ASTM-D3289
7	NORMAL HEPTHAN 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
ELEMENT ANALYSIS			
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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