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## ABOUT US

### ATDM Products :

- Oxidized Bitumen
- Penetration Bitumen
- Cutback Bitumen
- Emulsion Bitumen
- Gilsonite

### ATDM Company

Avizheh Technology and Development of Middle East Company with experienced management started to work for long term activity to aid development of our country in 2006.

The company's activity is production and sales of Bitumen and Gilsonite. ATDM is honored to be the pioneer of exporters and sale high quality bitumen and Gilsonite with safe, trusted and high speed system of transportation all over the world.

Gilsonite as a unique mineral is used in more than 160 products, primarily in dark colored printing inks and paints, oil well drilling muds & cements, asphalt modifiers, foundry sands additives and a wide variety of chemical products.

High quality Iran - bitumen produced according to ASTM standards and we are using : modern bitumen tankers , bitutainers , flexi tanks , bitubag ... , and storage terminals.

Avizheh Technology and Development of Middle East  
pioneer of Bitumen and Gilsonite



## OXIDIZED BITUMEN

**Oxidized bitumen** grades are suitable for :  
Sealing saw cuts and joints where there is expected to be the minimum amount of moving in the joint.  
Their wide temperature range prevents bleeding in high temperature applications.  
Oxidized bitumen can also be used in industrial applications like roofing, flooring, mastics, pipe coatings, electrical applications.

PROPERTY	GRADES								
	R75/25	R85/25	R90/15	R90/40	R95/15	R95/25	R115/15	R125/10	R150/5
RANGE OF SOFTENING POINT °C, RING AND BALL METHOD	70-80	80-90	85-95	85-95	90-100	90-100	110-120	120-130	145-155
RANGE OF PENETRATION (100G /5S /25°C), 0.1 MM	20-30	20-30	10-20	35-45	10-20	20-30	10-20	7-12	3-7
FLASH POINT, MIN °C (COC)	250	250	250	250	250	250	250	250	250
SOLUBILITY IN CARBON DISULPHIDE, TRICHLOROETHYLENE	99	99	99	99	99	99	99	99	99
ASH CONTENT, PER CENT BY MASS, MAX	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
LOSS ON HEATING FOR 8 H AT 143°C PER CENT BY MASS, MAX	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2



Oxidized bitumens: Industrial Bitumen is a dark, petroleum residue modified by the oxidation process.

# CUTBACK BITUMEN

**Cutback** asphalt is simply a combination of asphalt cement and petroleum solvent and reduce asphalt viscosity for lower temperature uses .

PROPERTY	Test method	GRADES									
		MC-30		MC-70		MC-250		MC-800		MC-3000	
		Max	Min	Max	Min	Max	Min	Max	Min	Max	Min
Kinematic Viscosity at 40°C mm <sup>2</sup> /s	ASTM D2170	60	30	140	70	500	250	1600	800	6000	3000
Flash Point (Tag Open-Cup), °C	ASTM D3143	-	38	-	38	-	66	-	66	-	66
<b>Distillate Test : Distillate, Volume Percent of Total Distillate to 360°C</b>											
To 225°C	ASTM D402	25	-	20	-	10	-	-	-	-	-
To 260°C	ASTM D402	70	40	60	20	55	15	35	-	15	-
To 316°C	ASTM D402	93	75	90	65	87	60	80	45	75	15
Residue from distillation to 360°C, percent volume by difference	ASTM D402	-	50	-	55	-	67	-	75	-	80
<b>Tests on Residue from Distillation</b>											
Viscosity at 60 °C,	ASTM D2170	120	30	120	30	120	30	120	30	120	30
Penetration at 25 °C,	ASTM D5	250	120	250	120	250	120	250	120	250	120
Ductility at 25 °C,	ASTM D113	-	100	-	100	-	100	-	100	-	100
Solubility in trichloroethylene, %	ASTM D2042	-	99	-	99	-	99	-	99	-	99
Water, %	ASTM D95	0.2	-	0.2	-	0.2	-	0.2	-	0.2	-



Cutback Bitumen: Used for tack coats, fog seals, slurry seals, stabilization material...



# PENETRATION BITUMEN

**Penetration** Grade Bitumen is a standard bitumen usually used as a road construction essential for heavy traffic road and for the production of asphalt pavements with various application, and it's very important once it bounds the aggregates and creates a unique cohesion and stability to the bituminous mix.

PROPERTY	Unit	Unit Test method	GRADES											
			250/330	160/220	100/150	85/100	80/100	60/70	50/70	40/60	35/50	30/45	20/30	10/20
Penetration at 25 oC	0.1mm	EN 1426	250-330	160-220	100-150	85-100	80-100	60-70	50-70	40-60	35-50	30-45	20-30	10-20
Softening Point	oC	EN 1427	30-38	35-43	39-47	41-49	42-50	43-51	46-54	48-56	50-58	52-60	55-63	65-75
Change of Mass Maximum	%	D.6	1.0	1.0	0.8	0.8	0.8	0.8	0.5	0.5	0.5	0.5	0.5	0.5
Retained Penetration Minimum	%	ASTM D5	35	37	43	44	45	46	50	50	53	53	55	25
Ductility	%	D.113	100	100	100	100	100	100	100	100	100	100	100	100
Flash Point Minimum	oC	EN2592	220	220	230	230	230	230	230	230	240	240	240	250
Solubility Minimum	%(m/m)	EN 12592	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0	99.0



Penetration Bitumen: Mainly used in the manufacture of hot mix asphalt for bases and wearing courses

# EMULSION BITUMEN

Bitumen Emulsion that is categorized in various road construction industries .

PROPERTY	GRADES								
	-	CRS1		CRS2		CSS1		CMS2	
	Test On Emulsions								
Property	Testmethod	Max	Min	Max	Min	Max	Min	Max	Min
Viscosity, Saybolt Furel at 25 °C, SFS	ASTM D244	-	-	-	-	100	20	-	-
Viscosity, Saybolt Furel at 25 °C, SFS	ASTMD3143	-	-	100	400	-	-	40	450
Storage stability test, 24 -h, %	ASTMD6930	20	100	-	1	1	-	-	1
Demulsibility, 35 mL, 0.8 % dioctyl sodium sulfosuccinate, %	ASTMD6936	-	1	40	-	-	-	-	-
Coating ability and water resistance									
Coating, dry aggregate	ASTM D244	-	-	-	-	-	-	good	-
Coating, after spraying	ASTM D244	-	-	-	-	-	-	Fair	-
Coating, wet aggregate	ASTM D244	-	-	-	-	-	-	Fair	-
Coating, after spraying	ASTM D244	-	-	-	-	-	-	Fair	-
Particle charge test	ASTM D244	Positive		Positive		Positive		Positive	
Sieve test, %	ASTMD6933	-	0.1	-	0.1	-	0.1	-	0.1
Cement mixing test, %	ASTMD6935	-	-	-	-	-	2.0	-	-
Tests on residue from distillation test									
Penetration, 25°C (77°F), 100 g, 5 s	ASTMD5	100	250	100	250	100	250	100	250
Ductility, 25°C (77°F), 5 cm/min, cm	ASTMD113	40	-	40	-	40	-	40	-
Solubility in trichloroethylene, %	ASTMD2042	97.5	-	97.5	-	97.5	-	97.5	-





# GILSONITE

**Gilsonite** is famous with ATDM brand in the world. It is used as fluid loss controller additives and a performance-enhancing agent for asphalt mixes.

PROPERTY	Test method	GRADES				
		Road Paving	Oil Drilling	Pipe Coating	Painting & Ink	Foundry
Softening Point	(ASTM E28-92)	166-180°C	>>232°C >>450°F	154-169°C 310-335°F	154-169°C 310-335°F	190-220°C
Ash	(ASTM D271-70 M)	2.0% Maximum	<=3.0%	0.25-0.40% Typical 0.90% Max. Guaranteed	0.25-0.40% Typical 0.90% Max. Guaranteed	20 % Maximum
Moisture	(AGC Method)	1.0% Maximum	<=1.0%	0.2-0.5% Typical 0.7% Max. Guaranteed	0.2-0.5% Typical 0.7% Max. Guaranteed	1-3 %
Penetration	(25°C, 100 gm, 5sec.)	0	0	0	0	0
Color in Mass	-	Black	Black	Black	Black	-
Flash Point	(COC)	316°C; 600°F	316°C; 600°F	316°C; 600°F	316°C; 600°F	-
Sulfur	-	0.3%	0.3%	0.3%	0.3%	4%
Specific Gravity	-	1.05	1.06	1.04	1.04	-
Viscosity	(25°C, 30% solids, Magie 470)	-	-	1,500-6,000 cPs	1,500-6,000 cPs	-



Gilsonite is found in commercial quantities only in the Utah of USA and the West of Iran.

## NOTE

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