

Bitumen 40/50

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Bitumen 40/50 is a type of penetrating bitumen that is widely used in the construction and road construction industry. Due to its special characteristics, this type of bitumen is used in various projects, including asphalt paving and insulation. In this article, we will examine the characteristics, applications, advantages and important points about bitumen 40/50.

Features

. Permeability Degree :

40/50 bitumen has a permeability degree between 40 and 50 tenths of a millimeter. This characteristic indicates the softness and adhesion of the bitumen to other materials. 40/50 bitumen is generally softer than bitumen with a higher permeability degree.

. Viscosity :

The viscosity of 40/50 bitumen is such that it exhibits suitable rheological properties at different temperatures. This characteristic allows the bitumen to perform well in different atmospheric and temperature conditions.

. Thermal stability :

This type of bitumen has high thermal stability, which makes it suitable for use in large projects and in different climatic conditions.

Applications

. Hot Asphalt :

40/50 bitumen is used as one of the main components in the production of hot asphalt. This type of asphalt is an ideal option for covering roads and streets due to its good adhesion and high resistance.

. Insulation :

This bitumen is widely used in the insulation of buildings and infrastructure. The waterproof property of 40/50 bitumen makes it a suitable option to prevent moisture penetration.

. Road surfacing :

40/50 bitumen is widely used in road construction and road surfacing projects. Its ability to withstand heavy loads and resist weather conditions makes it a suitable choice for these types of applications.

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Ambient Condition	Pressure(mm Hg) 760		Humidity(%)	
Test	Standard Range		Test Method	
	Min	Max	INSO	ASTM
Specific Gravity 25°C/25°C	1.01	1.06	3872	D70
Penetration 25°C-100gr-5s, 0.1mm	40	50	2950	D5
Softening Point °C (R&B)	49	-	3868	D36
Flash Point °C (Cleveland Open Cup)	230	-	198	D92
Ductility 25°C 5cm/min,cm	100	.	3866	D113
Solubility In Trichloroethylene (wt)%	99	.	2953	D2042
Spot Test	Negative		2949	AASHTO T102
Kinematic Viscosity 135°C.mm ² /s	.	.	12855	D2170
Dynamic Viscosity 60°C,Pa.s	.	.	12851	D2171
Penetration Index	-1.5	+0.7	-	EN 12607-1
Thin Film Oven Test .163 °c,3.2mm ,for 5 hours (TFOT)(ASTM D1754)				
Change In Mass (wt) %	-	0.8	2957	D1754
Penetration After Heating : 25°C - 100gr , 5s,0.1mm	-	-	2950	D5
Rateined Penetration %	55	.	2950	D5
Ductility After Heating 25°C , 5cm/min,cm	.	.	3866	D113
Dynnmic Viscosity After Heating 60°C. Pa.s	-	-	12851	D2171
Loss On Heating (ASTM D6)				
Loss On Heating (WT)%	.	0.2	.	D6
Penetration after heating 25°C - 100gr -5s , 0.1mm	.	-	.	D5
Drop In Penetration %	.	20	.	D6